

PUBLIC NOTICE

Bonnell Aluminum, Inc. has applied to the Tennessee Department of Environment and Conservation, Division of Air Pollution Control for renewal of their major source (Title V) operating permit subject to the provisions of Tennessee Air Pollution Control Regulations 1200-03-09-.02(11) (Title V Regulations). A major source operating permit is required by both the Federal Clean Air Act and Tennessee's air pollution control regulations. However, it should be noted that this facility has a current major source operating permit.

The applicant is **Bonnell Aluminum, Inc.** with a site address of Highway 53, Bonnell Road, Carthage, TN 37030. They have applied for renewal of their existing major source (Title V) operating permit for their Secondary Aluminum Processing Operation.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. In this case, EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. The status regarding EPA's 45-day review of these permits and the deadline for submitting a citizen's petition can be found at the following website address:

<https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>

Copies of the application materials and draft permits are available for public inspection during normal business hours at the following locations:

Cookeville Environmental Field Office
1221 South Willow Avenue
Cookeville, Tennessee 38506

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

Electronic copies of the draft permits are available by accessing the TDEC internet site located at:

<https://www.tn.gov/environment/ppo-public-participation/ppo-public-participation/ppo-air.html>

Questions concerning the source(s) may be addressed to Shandia Deloach at (615) 532-0608 or by e-mail at Shandia.Deloach@tn.gov.

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be received no later than 4:30 PM on **March 7, 2022**. To assure that written comments are received and addressed in a timely manner, written comments must be submitted using one of the following methods:

1. **Mail, private carrier, or hand delivery:** Address written comments to Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15th Floor, Nashville, Tennessee 37243.
2. **E-mail:** Submit electronic comments to air.pollution.control@tn.gov.

A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 22nd Floor, Nashville, TN 37243, 1-(866)-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243



OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (TAPCR). The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: TBD

Permit Number:

Date Expires: TBD

578587

Issued To:

Bonnell Aluminum, Inc.

Installation Address:

Highway 53, Bonnell Road
Carthage

Installation Description:

Secondary Aluminum Processing; Metal Coating Line Production of Extruded Architectural Metal Parts with Custom Finishing:

80-0009-03: Casting Furnace 02 - (NESHAP – Subpart RRR)

80-0009-06: Metal Parts Coating Line - (NESHAP – Subpart MMMM)

80-0009-10: Casting Furnace 04 - (NESHAP – Subpart RRR)

80-0009-13: Homogenizing Ovens 1 & 2

80-0009-14: One Diesel Emergency Generator - (NESHAP Subpart ZZZZ)

80-0009-15: Eleven Small Boilers and Process Heaters – (NESHAP Subpart DDDDD)

80-0009-16 – Acid Etch Process with Strippers No. 1 & No. 2

(See specific source conditions for detail)

Facility ID: 80-0009

Renewal Application Due Date:

Between ***** and *****

Primary SIC: 33 and 34

Information Relied Upon:

Minor Modification Application dated September 8,
2021

Renewal Application dated: September 29, 2020

Title V Permit No. 571158 issued: April 20, 2016

(continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

Permit No: 578587

Expiration Date:

POST AT INSTALLATION ADDRESS

RDA-1298

CONTENTS**SECTION A****GENERAL PERMIT CONDITIONS**

A1.	Definitions	1
A2.	Compliance requirement	
1		
A3.	Need to halt or reduce activity	
1		
A4.	The permit	1
A5.	Property rights	
1		
A6.	Submittal of requested information	1
A7.	Severability clause	2
A8.	Fee payment	2
A9.	Permit revision not required	3
A10.	Inspection and entry	3
A11.	Permit shield	3
A12.	Permit renewal and expiration	
4		
A13.	Reopening for cause	4
A14.	Permit transference	5
A15.	Air pollution alert	5
A16.	Construction permit required	
5		
A17.	Notification of changes	
5	A18. Schedule of compliance	
5		
A19.	Title VI	
6		
A20.	112 (r)	6

SECTION B**GENERAL CONDITIONS for MONITORING,
REPORTING, and ENFORCEMENT**

B1.	Recordkeeping	
7		
B2.	Retention of monitoring data	
7		
B3.	Reporting	7
B4.	Certification	7
B5.	Annual compliance certification	
7		
B6.	Submission of compliance certification	
8		

B7.	Emergency provisions	
8		
B8.	Excess emissions reporting	8
B9.	Malfunctions, startups and shutdowns - reasonable measures required	
9		
B10.	(Reserved)	9
B11.	Report required upon the issuance of notice of violation	
9		

SECTION C

PERMIT CHANGES

C1.	Operational flexibility changes	
10		
C2.	Section 502(b)(10) changes	10
C3.	Administrative amendment	10
C4.	Minor permit modifications	10
C5.	Significant permit modifications	
11		
C6.	New construction or modifications	
11		

SECTION D

GENERAL APPLICABLE REQUIREMENTS

D1.	Visible emissions	
12		
D2.	General provisions and applicability for non-process gaseous emissions	
12		
D3.	Non-process emission	12
D4.	General provisions and applicability for process gaseous	
12		
D5.	Particulate emissions from process emission sources	
12		
D6.	Sulfur dioxide emission standards	
12		
D7.	Fugitive dust	12
D8.	Open burning	13
D9.	Asbestos	13
D10.	Annual certification of compliance	13
D11.	Emission Standards for Hazardous Air Pollutants	
13		
D12.	Standards of Performance for New Stationary Sources	
13		

- D13. Gasoline Dispensing Facilities**
13
- D14. Internal Combustion Engines**
13

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

- E1. Fee Payment:Actual Emissions**
14
- E2. Reporting and Plantwide Requirements**
16-20
- E3. 40 CFR 63 Subpart RRR: NESHAP Reporting Requirements**
21
- E4. 40 CFR 63 Subpart RRR: NESHAP Requirements**
21-33
- E5. State Only Requirements for the Melting & Casting Operations**
33-35
- E6. 40 CFR 63 Subpart MMMM: NESHAP Reporting Requirements**
35-38
- E7. 40 CFR 63 Subpart MMMM: NESHAP Compliance Requirements**
38-54
- E8. State Only Requirements for Coating Operations (80-0009-06)**
54-59
- E9. Homogenizing Ovens 1& 2** 60
- E10-1 – E10-9 (Requirements for One Diesel-Fired Emergency Generator**
60-64
- E-11-1 through E11-15 (requirements for Small Boilers and Process Heaters, Subject-
to NESHAP Subpart DDDDD)**
64-67
- E12-1 Acid Etch Process and ammonia Strippers No. 1 and 2.**
68

End of Permit No. 578587

ATTACHMENTS

- | | | |
|---------------------|---|---------|
| ATTACHMENT 1 | Opacity Matrix Decision Tree for Visible Emission Evaluation
Methods 2 & 9, dated June 18, 1996 (amended September 11, 2013) | 2 pages |
| ATTACHMENT 2 | TABLE 3 to Subpart MMMM of Part 63-Default Organic HAP
Mass Fraction for Solvents and Solvent Blends | 2 pages |

and
TABLE 4 to Subpart MMMM of Part 63-Default Organic HAP
Mass Fraction for Petroleum Solvent Groups

ATTACHMENT 3 **Appendix A to Subpart PPPP of Part 63—Determination of**
3 pages **Weight Volatile Matter Content and Weight Solids Content of**
Reactive Adhesives

ATTACHMENT 4 **TABLE 1 to Subpart MMMM of Part 63-Operating Limits**
2 pages

ATTACHMENT 5 **Procedures for Conducting Performance Test According to**
3 pages **40 CFR §§63.3964, 63.3965, 63.3966 and 63.3967 for the Emission**
Rate with Add-On Controls Compliance Option

ATTACHMENT 6 **Continuous Parameter Monitoring System Installation,**
4 pages **Operational and Maintenance According to CFR §§63.3968**
for the Emission Rate with Add-On Controls Compliance Option

ATTACHMENT 7 **40 CFR 63 Subpart DDDDD – National Emission Standards for**
Hazardous Air Pollutants for Major Sources: Industrial,
Commercial, and Institutional Boilers and Process Heaters - Table 3, **2**
Work Practice Standards

Pages

ATTACHMENT 8 **40 CFR 63 Subpart DDDDD – National Emission Standards for**
Hazardous Air Pollutants for Major Sources: Industrial,
Commercial, and Institutional Boilers and Process Heaters - Table 10,
Applicability of General Provisions to Subpart DDDDD **3 Pages**

ATTACHMENT 9 **Title V Fee Selection Form APC 36** **2 Pages**

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance

with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

DRAFT

- A7. Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

(a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.

(b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.

(c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.

(d) Where more than one allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.
2. A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.
3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM₁₀ shall not be placed in either the regulated HAP category or miscellaneous HAP category.
4. Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM₁₀, sulfur dioxide (SO₂), volatile organic compounds (VOC), nitrogen oxides (NO_x), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.
5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).
6. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.

TAPCR 1200-03-26-.02 (3) and (9) and 1200-03-09-.02(11)(e)1(vii)

- A9. Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

A10. Inspection and entry. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

- (a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- (b) Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - 3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - 4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) If the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).

(c) This permit, its shield provided in **Condition A11**, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)3 and 2, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

(a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:

1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.

2. Additional requirements become applicable to an affected source under the acid rain program.

3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.

(c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.

(d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:

1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.

2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.

3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under **Condition A13 (b)** and **Condition A13 (c)**.

4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to **Condition A13(d)**, he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written

brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR 1200-03-09-.02(11)(f)6 and 7.

A14. Permit transference. An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
- (b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.

A16. Construction permit required. Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

A17. Notification of changes. The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

- (a) change in air pollution control equipment
- (b) change in stack height or diameter
- (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

A18. Schedule of compliance. The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Title VI.

(a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

(b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

(c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

A20. 112 (r). Sources which are subject to the provisions of Section 112(r) of the federal Clean Air Act or any federal regulations promulgated thereunder, shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. The annual certification is due in the office of the Technical Secretary no later than January 31 of each year. Said certification will be for the preceding calendar year.

TAPCR 1200-03-32-.03(3)

SECTION B

**GENERAL CONDITIONS for MONITORING,
REPORTING, and ENFORCEMENT**

- B1. Recordkeeping.** Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.
- (a) Where applicable, records of required monitoring information include the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The company or entity that performed the analysis;
 4. The analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- (b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.
- TAPCR 1200-03-09-.02(11)(e)1(iii)
- B2. Retention of monitoring data.** The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II
- B3. Reporting.** Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.
- TAPCR 1200-03-09-.02(11)(e)1(iii)
- B4. Certification.** Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- TAPCR 1200-03-09-.02(11)(d)4
- B5. Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):
- (a) The identification of each term or condition of the permit that is the basis of the certification;

(b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;

(c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and

(d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air and EPCRA Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
---	-----	---

TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative

maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than

twenty-four hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

- B9. Malfunctions, startups and shutdowns - reasonable measures required.** The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

- B10.** Reserved.

- B11. Report required upon the issuance of a notice of violation for excess emissions.** The permittee must submit within twenty days after receipt of the notice of violation, the data required below. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty day time period. The minimum data requirements are:
- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
 - (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - (c) The time and duration of the emissions;
 - (d) The nature and cause of such emissions;
 - (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
 - (f) The steps taken to limit the excess emissions during the occurrence reported, and
 - (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

- C1. Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
 - (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
 - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
 - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
 - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
 - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
 - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

- C2. Section 502(b)(10) changes.**
- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
 - (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
 - (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4(i)

C3. Administrative amendment.

(a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

(b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.

(c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

C4. Minor permit modifications.

(a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).

(b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.

(c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

(d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

(a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).

(b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

(a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.

(b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).

(c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty percent for an aggregate of more than five minutes in any one hour or more than twenty minutes in any twenty-four hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty percent (6-minute average) except for one six minute period per one hour of not more than forty percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.

- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.

- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

D7. Fugitive Dust.

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;

DRAFT

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five minutes per hour or twenty minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

D8. Open burning. The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

D11. Emission Standards for Hazardous Air Pollutants. When applicable, the permittee shall comply with the TAPCR 0400-30-38 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-38

D12. Standards of Performance for New Stationary Sources. When applicable, the permittee shall comply with the TAPCR 0400-30-39 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-39

D13. Gasoline Dispensing Facilities. When applicable, the permittee shall comply with the TAPCR 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14. Internal Combustion Engines.

(a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-38-.01.

Permit No: 578587

Expiration Date:

- (b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.01.
- (c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.02.

TAPCR 0400-30-38 and 39

SECTION E
SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

80-0009	Facility Description:	Secondary aluminum processing; Metal coating line; Production of extruded architectural metal parts with custom finishing.
----------------	------------------------------	--

The following conditions E1 & E2 shall apply to all sources in Section E of this permit unless otherwise noted.

E1. Fee Payment:

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE

80-0009

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	155.38	AEAR	
PM ₁₀	N/A	N/A	
SO ₂	0.43	N/A	
VOC	190.99	AEAR	
NO _x	51.8	AEAR	
CO	29.84	AEAR	
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)*			
VOC FAMILY GROUP	N/A	N/A	N/A
NON-VOC GASEOUS GROUP	N/A	N/A	N/A
PM FAMILY GROUP	N/A	N/A	N/A
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)**			
VOC FAMILY GROUP	142.89	AEAR	Included in VOC above
NON-VOC GASEOUS GROUP	23.36	AEAR	HCl (not included in above categories)
PM FAMILY GROUP	N/A	AEAR	(include if present)
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT	N/A	N/A	

NOT LISTED ABOVE

NOTES

* At such time as non-VOC HAPs are used, they shall be reported above as non-VOC gaseous HAP emissions with a standard.

AAP The **Annual Accounting Period (AAP)** is a 12 consecutive month period that **either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b) begins January 1st and ends December 31st of the same year when paying on a calendar year basis.** The **Annual Accounting Period** at the time of permit renewal issuance **began July 1, 2020 and ends June 30, 2021.** The next Annual Accounting Period begins **July 1, 2021** and ends **June 30, 2022** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions. Changes in fee bases must be made using the Title V Fee Selection form, form number APC 36 (CN-1583), included as an attachment (Attachment 9) to this permit and available on the Division of Air Pollution Control's website.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR If the permittee is paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **Actual Emissions Analysis** is **Required** to determine the actual emissions of:

- (1) **each regulated pollutant** (Particulate matter, SO₂, VOC, NO_x and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) **each pollutant group** (VOC Family, Non-VOC Gaseous, and Particulate Family),
- (3) **the Miscellaneous HAP Category,**
- (4) **the Specific HAP Category, and**
- (5) **the NSPS Category**

under consideration during the **Annual Accounting Period.**

* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation,** the **Miscellaneous HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

** **Category Of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous**

group, or the **Particulate (PM) Family** group. **For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

*** **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO₂, VOC** or **NO_x** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

END NOTES

The permittee shall:

- (1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in TAPCR 1200-03-26-.02(9)(g). Fees may be paid on an **actual, allowable, or mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).
- (2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d).
- (3) Sources paying annual emissions fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
 - (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.
- (4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and

pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d).

The **actual emissions analysis** shall include:

- (a) the completed **Fee Emissions Summary Table**,
- (b) each **actual emissions analysis** required, and
- (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. The summary must include sufficient information for the Technical Secretary to determine the accuracy of the calculations. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions analysis**.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).

- (5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

The annual emission fee due dates are specified in TAPCR 1200-03-26-.02(9)(g) and are dependent on the Responsible Official's choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within 15 days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in **Condition A8(d)** of this permit.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:

Payment of Fee to:

The Tennessee Department of Environment and Conservation
Division of Fiscal Services
Consolidated Fee Section – APC
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 10th Floor
Nashville, Tennessee 37243

Actual Emissions Analyses to:

The Tennessee Department of Environment and Conservation
Division of Air Pollution Control
Emission Inventory Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243

or

An electronic copy (PDF) of actual emissions analysis can also be submitted to:

apc.inventory@tn.gov

E2. Reporting Requirements.

- (a) **Semiannual reports** Semiannual reports since issuance of this permit renewal shall cover the 6-month periods from **January 1** through **June 30**, and **July 1** through **December 31**, and shall be

submitted within 60 days after the end of each 6-month periods. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
571158	January 1, 2022	day before new permit issuance (with year)
578587	Issuance Date of new permit (with year)	end of SAR period (with year)

The semiannual reports for the Title V permit shall include:

- (1) Any monitoring and recordkeeping required by **Conditions E8-1, E8-3, E8-4, E10-3 through E10-8 of Title V permit 578587**. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The visible emission evaluation readings from Conditions **E2(d)-5, E5-2 and E8-2** of Title V permit 578587 if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

Copy to: **Cookeville Environmental Field Office** OR Adobe Portable Document Format (PDF)
1221 South Willow Avenue APC.CookEFO@tn.gov
Cookeville, TN 38506

- (4) **MACT Reports**: Under the Provisions of 63.10(a)(4)(ii), any required MACT reports shall be submitted to the delegated State authority as well as to the Regional Office of the EPA.

Any monitoring and recordkeeping required by **E3-2 (MACT Subpart RRR), E5-3, E6-2 (MACT Subpart MMMM), E8-1, E8-3, E8-4, E10-3, E10-9 of Title V permit 578587**. For reporting and recordkeeping **MACT Subpart DDDDDD**, the notifications in 40 CFR 63 Subpart A, General Provisions indicated in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply must be submitted by the dates specified under Emission source **80-0009-15** and also **Attachment 8** of this permit. **For the requirements of reporting for 40 CFR 63 Subpart ZZZZ, see Source 80-0009-14.**

The current MACT reporting period (for the Subpart MMMM, Metal Parts Coating MACT) and (for the Subpart RRR, Secondary Aluminum Production MACT) since issuance of this permit renewal are January 1

through the following June 30 and July 1 through the following December 31. The permittee must submit semiannual MACT compliance reports (Subpart RRR and Subpart MMMM) to the Division in accordance with the provisions of 40 CFR §63.10(a)(5). Each semiannual compliance report must be postmarked or delivered no later than 60 days after the end of the semiannual reporting period.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

Note that each report must be accompanied by a separate compliance certification statement.

Title V MACT reports shall be submitted to the following addresses:

**The Technical Secretary
Tennessee Air Pollution Control Division
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th
Floor
Nashville, Tennessee 37243**

OR Adobe Portable Document Format (PDF)
Copy to:
Air.Pollution.Control@tn.gov

And

**U. S. EPA Region 4
ATTN: Air and EPCRA Enforcement
Branch
61 Forsyth Street, SW
Atlanta, Georgia 30303**

TAPCR 1200-03-09-.02(11)(e)1.(iii)

- (b) **Annual compliance certification:** The permittee shall submit annually compliance certifications with the terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2-1(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an *excursion or **exceedance as defined below occurred; and

(4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “**Excursion**” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “**Exceedance**” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month periods from January 1 of each calendar year to December 31 of each calendar year and shall be submitted within 60 days after the 12-month reporting period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
571158	January 1, 2022	day before new permit issuance (with year)
578587	Issuance Date of new permit (with year)	end of ACC period (with year)

These certifications shall be submitted to:

TN APCD and **EPA**

The Technical Secretary and
Division of Air Pollution
Control
William R. Snodgrass Tennessee
Tower
312 Rosa L Parks Avenue, 15th
Floor
Nashville, TN 37243
or
e-mail:
air.pollution.control@tn.gov

Air Enforcement
Branch
US EPA Region IV
61 Forsyth Street,
SW
Atlanta, Georgia
30303

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

- (c) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

(d) **General Permit Requirements**

Unless otherwise specified, the following Conditions shall apply to all sources in section E of this permit.

E2(d)-1. Identification of Responsible Official, Technical Contact, and Billing Contact of the permitted facility:

a) The application that was utilized in the preparation of this permit is dated **September 29, 2020**, and signed by Responsible Official **Brett Burris, Plant Manager**. If this person terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.

b) The application that was utilized in the preparation of this permit is dated **September 29, 2020**, and identifies **Barry Cohoon** as the Principal Technical Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.

c) The application that was utilized in the preparation of this permit is dated **September 29, 2020**, and identifies **Barry Cohoon** as the Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

E2(d)-2. Only natural gas or propane shall be used as fuels for all combustion sources listed in this permit.

E2(d)-3. This facility is not subject to the provisions of 1200-03-32 (Prevention of Accidental Releases) or Section 112(r) of the Clean Air Act.

E2(d)-4. All data, including all required calculations, must be entered in the log no later than 30 days from the end of the month the data is required.

E2(d)-5. Unless otherwise specified visible emissions from this source shall not exhibit greater than twenty percent opacity, except for one six-minute period in any one hour period and for no more than four six-minute periods in any twenty-four hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-3-5-.01(1) and 1200-3-5-.03(6)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring (Opacity Matrix) for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

E2(d)-6. For fee purposes, emissions from fuel combustion shall be calculated as indicated below for each Annual Accounting Period (AAP). The following logs are for the calculation of the emissions from fuel combustion. These emissions shall be calculated from the emission factors provided in Tables 1.3-1, 1.3-2, 1.4-1, and 1.4-2 of **EPA AP-42**, 7/98 Revision.

MONTHLY FUEL USAGE LOG FOR FEE PURPOSES

MONTH/YEAR	Natural Gas Usage (Cubic feet per month)	LPG (Propane) Usage (Gallons per month)
Total for Annual Accounting Period (12- months)		

ANNUAL EMISSIONS LOG (FOR FEE ACCOUNTING PERIOD OF JULY 1, year TO JUNE 30, year + 1)

Annual (Fee) Accounting Period (July 1 to June 30 of the following year)	PM (ton per AAP)	SO₂ (tons per AAP)	VOC (tons per AAP)	NO_x (tons per AAP)
July 1, year through June 30, year+1				

THE METHOD OF CALCULATION FOLLOWS:

ANNUAL EMISSIONS CALCULATIONS FOR NATURAL GAS COMBUSTION:

Particulate emissions, tons per year = (annual gas usage, millions of cubic feet) (7.6 pounds per million cubic feet) / (2000 Pounds/ton)

SO₂ emissions, tons per year = (annual gas usage, millions of cubic feet) (0.6 pounds per million cubic feet) / (2000 Pounds/ton)

VOC emissions, tons per year = (annual gas usage, millions of cubic feet) (5.5 pounds per million cubic feet) / (2000 Pounds/ton)

For Furnace 02:

NO_x emissions, tons per year = (annual gas usage, millions of cubic feet) (100 pounds per million cubic feet) / (2000 Pounds/ton)

For furnace 04:

NO_x emissions, tons per year = (annual gas usage, millions of cubic feet) (71.4 pounds per million cubic feet) / (2000 Pounds/ton)

AP-42 Table 1.4-1 and AP 42 1.4-2

ANNUAL EMISSIONS CALCULATIONS FOR LPG (PROPANE) FUEL COMBUSTION:

Particulate emissions, tons per year = (annual LPG fuel usage, gallons) (0.7 pound per 1000 gallon of LPG Fuel) (2000 pounds / ton)

SO₂ emissions, tons per year = (annual LPG fuel usage, gallons) (0.10 x S *pound per 1000 gallon of LPG Fuel) (2000 pounds / ton)

VOC emissions, tons per year = (annual LPG fuel usage, gallons) (0.8 pound per 1000 gallon of LPG Fuel) (2000 pounds / ton)

NOx emissions, tons per year = (annual LPG fuel usage, gallons) (13 pounds per 1000 gallon of LPG Fuel) (2000 pounds / ton)

AP-42 Table 1.5-1

* S= fuel sulfur content by weight percent

TAPCR 1200-3-26-.02(9)(b)

SOURCE SPECIFIC CONDITIONS**Aluminum Melting and Casting Operations:****80-0009-03** – Casting Furnace 02, firing natural gas with propane backup, exhausting to Stack S-CF2

80-0009-10 – 26.8 MMBtu/hr Casting Furnace 04, firing natural gas with propane backup, low NOx burner

E3. 40 CFR 63 Subpart RRR: MACT Emissions Standards

E3-1. The Permittee shall comply with all applicable provisions of 40 CFR Part 63, Subpart RRR “National Emission Standards for Hazardous Air Pollutants from Secondary Aluminum Production” and Subpart A “General Provisions”.

This includes, but is not restricted to, the following limits, as specified for each of the furnaces (including the sidewells):

Pollutant	Allowable Emission Limit, Daily Average
PM	0.40 lb per ton
D/F TEQ	2.1 x 10 ⁻⁴ grains per ton
HF	0.40 lb per ton
HCl	0.40 lb per ton

Note: Allowable emissions are expressed in terms of lb per ton of metal produced for Group 1 Furnaces

40 CFR §63.1505 (i)**[40 CFR Part 63 Subpart A and 40 CFR Part 63 Subpart RRR]****E4. 40 CFR 63 Subpart RRR: MACT Requirements**

E4-1. All affected sources (**80-0009-03 and 80-0009-10**) at this facility shall comply with all applicable requirements of 40 CFR Part 63, Subpart RRR “National Emission Standards for Hazardous Air Pollutants from Secondary Aluminum Production”. The requirements of this subpart apply to the owner or operator of the following affected sources, located at a secondary aluminum production facility that is a major source of hazardous air pollutants (HAPs):

Group 1 furnace means a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing*, or processes clean charge with reactive fluxing.

[40 CFR Part 63.1500]

* Reactive fluxing means the use of any gas, liquid, or solid flux (other than cover flux) that results in a HAP emission. Argon and nitrogen are not reactive and do not produce HAP.

E4-2. The Permittee, for all group 1 furnaces shall not exceed the emission standards for a SAPU:

- a. 0.20 kg of PM per Mg (**0.40 lb of PM per ton**) of feed/charge from a group 1 furnace, that is not a melting/holding furnace processing only clean charge, at a secondary aluminum production facility that is a major source;
- b. 15 µg of dioxin and furan (D/F) toxicity equivalent (TEQ) per Mg (**2.1 x 10⁻⁴ gr of D/F TEQ per ton**) of feed/charge from a group 1 furnace. This limit does not apply if the furnace processes only clean charge.
- c. 0.20 kg of hydrogen fluoride (HF) per Mg (0.40 lb of HF per ton) and 0.20 kg of hydrogen chloride (HCl) per Mg (**0.40 lb of HCl per ton**) of feed/charge from a group 1 furnace.
- d. The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.
- e. The owner or operator of a sidewall group 1 furnace that conducts reactive fluxing in the hearth, or that conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the hearth, must comply with the emission limits on the basis of the combined emissions from the sidewall and the hearth.

[40 CFR 63.1505(i)]**E4-3. The Permittee shall comply with the emission limits calculated using the equations for PM, HCl, HF, and D/F listed in this condition for each SAPU. Alternatively, the Permittee may demonstrate compliance with the emission limits in this condition by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits listed in Condition E4-2.**

- a. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{C_{PM}} = \frac{\sum_{i=1}^n (L_{ti_{PM}} * T_{ti})}{\sum_{i=1}^n T_{ti}}$$

Where,

$L_{ti_{PM}}$ = The PM emission limit for individual emission unit i (group 1 furnace);

T_{ti} = The feed/charge rate for individual emission unit i; and

$L_{C_{PM}}$ = The PM emissions limit for the secondary aluminum processing unit.

- b. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl or HF in excess of:

$$L_{c_{HCl/HF}} = \frac{\sum_{i=1}^n (L_{ti_{HCl/HF}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$$

Where,

$L_{ti_{HCl/HF}}$ = The HCl or HF emission limit for individual emission unit i for a group 1 furnace; and

$L_{c_{HCl/HF}}$ = The daily HCl or HF emission limit for the secondary aluminum processing unit.

- c. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D/F in excess of:

$$L_{C_{D/F}} = \frac{\sum_{i=1}^n (L_{ti_{D/F}} * T_{ti})}{\sum_{i=1}^n T_{ti}}$$

Where,

$L_{ti_{D/F}}$ = The D/F emission limit for individual emission unit i for a group 1 furnace; and

$L_{C_{D/F}}$ = The D/F emission limit for the secondary aluminum processing unit.

Note: Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

[40 CFR 63.1505(k) and 40 CFR 63.1513(e)]

Operating and Monitoring Requirements:

E4-4. The permittee shall prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The plan shall be accompanied by a written certification by the owner or operator that the OM&M plan satisfies all requirements of this section and is otherwise consistent with the requirements of the subpart. The owner or operator shall comply with all of the provisions of the OM&M plan as submitted to the permitting authority, unless and until the plan is revised in accordance with the following procedures. If the permitting authority determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the owner or operator shall promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the permitting authority. Each plan shall contain the following information:

- Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- A monitoring schedule for each affected source and emission unit.
- Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.

- d. Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- e. Procedures for monitoring process and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- f. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
 - i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- g. A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- h. Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in **Condition E4-9** for each group 1 furnace not equipped with an add-on air pollution control device.
- i. Procedures to be followed when changing furnace classifications under the provisions of §63.1514.

[40 CFR 63.1510(b)]

- E4-5.** When a process parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the Permittee shall initiate corrective action. Corrective action shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of deviation.

[40 CFR 63.1506(p)]

- E4-6.** The Permittee shall conduct monthly inspections to confirm that posted labels on each group 1 furnace are intact, legible and provide the required information, including:
- a. The type of affected source or emission unit.
 - b. The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance, and Monitoring (OM&M) plan.

[40 CFR 63.1506(b) & 40 CFR 63.1510(c)]

E4-7. For each affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) of feed/charge, the Permittee shall:

- a. Except as provided in paragraph (d) of this condition, install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and
- b. Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
- c. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
- d. The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:
 - i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU, and
 - ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.

[40 CFR 63.1506(d) and 40 CFR 63.1510(e)]

E4-8. The Permittee shall:

- a. Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit.
 - i. The monitoring system shall record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
 - ii. The accuracy of the weight measurement device shall be ± 1 percent of the weight of the reactive component of the flux being measured. The owner or operator may apply to the permitting authority for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards.
 - iii. The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
- b. Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in §63.1512(o).
- c. Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:
 - i. Gaseous or liquid reactive flux other than chlorine; and
 - ii. Solid reactive flux.
- d. Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in §63.1512(o).

- e. The owner or operator of a group 1 furnace performing reactive fluxing may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

[40 CFR 63.1510(j)]

E4-9. The following requirements apply to the owner or operator of a group 1 furnace that is not equipped with an add-on air pollution control device.

- a. Maintain the total reactive chlorine flux injection rate and fluorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test. **The total reactive chlorine flux injection rate for each operating cycle or time period is obtained from the most recent performance test and may be revised upon receipt and acceptance of new test data which indicates compliance with the applicable regulations.**
- b. Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.
- c. Develop and maintain a written site-specific monitoring plan to be submitted to the permitting authority as part of the OM&M plan. The site-specific monitoring plan shall contain sufficient procedures to ensure continuing compliance with all applicable emission limits and demonstrate, based on documented test results, the relationship between emissions of PM, HCl, HF, and D/F and the proposed monitoring parameters for each pollutant. Test data shall establish the highest level of PM, HCl, HF, and D/F that will be emitted from the furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If the permitting authority determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of 40 CFR Part 63, Subpart RRR, the Permittee shall promptly make all necessary revisions and resubmit the revised plan to the permitting authority.
- d. Each site-specific monitoring plan shall document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.
- e. Each site-specific monitoring plan shall include provisions for unit labeling as required in **Condition E4-6**, feed/charge weight measurement (or production weight measurement) as required in **Condition E4-7**, and flux weight measurement as required in **Condition E4-8**.
- f. The site-specific monitoring plan shall include a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials and should include:

- (1) A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples;
 - (2) A scrap inspector-training program;
 - (3) An established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples;
 - (4) Periodic physical measurements of oil and coatings content of randomly selected samples and comparison with visual inspection results;
 - (5) A system for assuring that only acceptable scrap is charged to an affected group 1 furnace; and
 - (6) Record keeping requirements to document conformance with plan requirements.
- g.** The site-specific monitoring plan may include a program for determining, monitoring, and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method shall include:
- (1) Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test;
 - (2) Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test;
 - (3) Operating, monitoring, recordkeeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace;

[40 CFR 63.1506(n), 40 CFR 63.1510(o) - 40 CFR 63.1510(q)]

E4-10. Site-specific requirements for secondary aluminum-processing units.

- a.** The Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
- i. The identification of each emission unit in the secondary aluminum processing unit;
 - ii. The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;
 - iii. The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit;
 - iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and

- v. The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).
- b. The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:
 - i. Any averaging among emissions of differing pollutants;
 - ii. The inclusion of any affected sources other than emission units in a secondary aluminum-processing unit;
 - iii. The inclusion of any emission unit while it is shut down; or
 - iv. The inclusion of any periods of startup, shutdown, or malfunction in emission calculations.
- c. To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee shall submit a request to the Technical Secretary containing the information required by paragraph (a) of this Condition and obtain approval of the Technical Secretary prior to implementing any revisions.

[40 CFR 63.1510(s)]

E4-11. Except as provided in part f. of this condition, the Permittee shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall:

- a. Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required in 40 CFR 63.1510(e). If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.
- b. Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
- c. Divide the total emission for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- d. Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i * ER_i)}{\sum_{i=1}^n T_i}$$

Where,

E_{day} = The daily PM, HCl, or D/F (and HF for uncontrolled group 1 furnaces) emission rate for the secondary aluminum processing unit for the 24-hour period;

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons or Mg);

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or $\mu\text{g/Mg}$ of feed/charge); and

n = The number of emission units in the secondary aluminum processing unit.

- e. Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.
- f. As an alternative to the calculations above, the Permittee may demonstrate through performance tests that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.

[40 CFR 63.1510(t) & 40 CFR 63.1510(u)]

Testing Requirements:

E4-12. The Permittee shall conduct a performance test every 5 years, following the initial performance test. Each performance test shall be conducted in accordance with the requirements and procedures established in 40 CFR 63.1511.

- a. The performance tests shall be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the permitting authority for major sources, or the Administrator for area sources. These new parametric settings shall be used to demonstrate compliance for the period being tested.
- b. Each performance test for a continuous process shall consist of 3 separate runs; pollutant sampling for each run shall be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.
- c. Each performance test for a batch process shall consist of three separate runs; pollutant sampling for each run shall be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in appendix A to part 60, use the procedure provided in 40 CFR 63.1511(3)(i) through (iii) to ensure that sampling is conducted over the entire process operating cycle.
- d. Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run shall be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter.

- e. Compliance with an applicable emission limit or standard is demonstrated if the average of three runs conducted during the performance test is less than or equal to the applicable emission limit or standard.
- f. Apply paragraphs (a) through (e) of this section for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant.
- g. The owner or operator may not conduct performance tests during periods of malfunction.

[40 CFR 63.1511(b) and 40 CFR 63.1511(e)]

E4-13. Testing of representative emission units:

- a. With the prior approval of the permitting authority, an owner or operator may utilize emission rates obtained by testing a particular type of group 1 furnace which is not controlled by any add-on control device, or by testing an in-line flux box which is not controlled by any add-on control device, to determine the emission rate for other units of the same type at the same facility. Such emission test results may only be considered to be representative of other units if all of the following criteria are satisfied:
 - i. The tested emission unit shall use feed materials and charge rates which are comparable to the emission units that it represents;
 - ii. The tested emission unit shall use the same type of flux materials in the same proportions as the emission units it represents;
 - iii. The tested emission unit shall be operated utilizing the same work practices as the emission units that it represents;
 - iv. The tested emission unit shall be of the same design as the emission units that it represents; and
 - v. The tested emission unit shall be tested under the highest load or capacity reasonably expected to occur for any of the emission units that it represents.

[40 CFR 63.1511(f)]

E4-14. A minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by §63.1510 must be established that ensures compliance with the applicable emission standard. To establish the minimum or maximum value or range, the appropriate procedures must be followed and information required by §63.1515(b)(4) must be submitted. The owner or operator may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the permitting authority:

- a. The complete emission test report(s) used as the basis of the parameter(s) is submitted.
- b. The same test methods and procedures as required by this subpart were used in the test.
- c. The owner or operator certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.
- d. All process and control equipment operating parameters required to be monitored were monitored as required in this subpart and documented in the test report.
- e. If the owner or operator wants to conduct a new performance test and establish different operating parameter values, they must submit a revised site specific test plan and receive approval in

accordance with paragraph (a) of this section. In addition, if an owner or operator wants to use existing data in addition to the results of the new performance test to establish operating parameter values, they must meet the requirements in a. through d.

[40 CFR 63.1511(g)]

E4-15 In the site-specific monitoring plan required by §63.1510(o), the owner or operator of a group 1 furnace (including melting/holding furnaces) without add-on air pollution control devices must include data and information demonstrating compliance with the applicable emission limits.

- a. If the group 1 furnace processes other than clean charge material, the owner or operator must conduct emission tests to measure emissions of PM, HCl, HF, and D/F at the furnace exhaust outlet.
- b. If the group 1 furnace processes only clean charge, the owner or operator must conduct emission tests to simultaneously measure emissions of PM, HCl and HF. A D/F test is not required. Each test must be conducted while the group 1 furnace (including a melting/holding furnace) processes only clean charge.
- c. The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine and fluorine contained in reactive flux added to the group 1 furnace is emitted as HCl and HF. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl or HF.
- d. When testing an existing uncontrolled furnace, the owner or operator must comply with one of the following options:
 - i. Install hooding that meets ACGIH Guidelines (incorporated by reference, see §63.14), or
 - ii. At least 180 days prior to testing petition the permitting authority for major sources, or the Administrator for area sources, that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to the paragraph (e)(7) of this section, or
 - iii. Assume an 80-percent capture efficiency for the furnace exhaust (i.e., multiply emissions measured at the furnace exhaust outlet by 1.25). If the source fails to demonstrate compliance using the 80-percent capture efficiency assumption, the owner or operator must re-test with a hood that meets the ACGIH Guidelines within 180 days, or petition the permitting authority for major sources, or the Administrator for area sources, within 180 days that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to paragraph (e)(7) of this section.
- e. The installation of hooding that meets ACGIH Guidelines (incorporated by reference, see §63.14) is considered impractical if any of the following conditions exist:
 - i. Building or equipment obstructions (for example, wall, ceiling, roof, structural beams, utilities, overhead crane or other obstructions) are present such that the temporary hood cannot be located consistent with acceptable hood design and installation practices;
 - ii. Space limitations or work area constraints exist such that the temporary hood cannot be supported or located to prevent interference with normal furnace operations or avoid unsafe working conditions for the furnace operator; or
 - iii. Other obstructions and limitations subject to agreement of the permitting authority for major sources, or the Administrator for area sources.

- f. Testing procedures that will minimize unmeasured emissions may include, but are not limited to the following:
- i. Installing a hood that does not entirely meet ACGIH guidelines;
 - ii. Using the building as an enclosure, and measuring emissions exhausted from the building if there are no other furnaces or other significant sources in the building of the pollutants to be measured;
 - iii. Installing temporary baffles on those sides or top of furnace opening if it is practical to do so where they will not interfere with material handling or with the furnace door opening and closing;
 - iv. Minimizing the time the furnace doors are open or the top is off;
 - v. Delaying gaseous reactive fluxing until charging doors are closed and, for round top furnaces, until the top is on;
 - vi. Agitating or stirring molten metal as soon as practicable after salt flux addition and closing doors as soon as possible after solid fluxing operations, including mixing and dross removal;
 - vii. Keeping building doors and other openings closed to the greatest extent possible to minimize drafts that would divert emissions from being drawn into the furnace;
 - viii. Maintaining burners on low-fire or pilot operation while the doors are open or the top is off;
 - ix. Use of fans or other device to direct flow into a furnace when door is open; or
 - x. Removing the furnace cover one time in order to add a smaller but representative charge and then replacing the cover.

[40 CFR 63.1512(e)]

E4-16. For each Secondary Aluminum Processing Unit (SAPU), the Permittee shall conduct performance tests, as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, HCl, and HF and micrograms (µg) TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation found in 40 CFR 63.1510(t). A performance test is required for:

- a. Each group 1 furnace processing only clean charge - to measure emissions of PM and emissions of HCl and HF.
- b. Each group 1 furnace that processes scrap other than clean charge - to measure emissions of PM, D/F, HCl, and HF.

[40 CFR 63.1512(j)]

E4-17. During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of an affected source or emission unit:

- a. Shall measure and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight.
- b. That chooses to demonstrate compliance on the basis of the aluminum production weight shall measure the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight.
- c. Establish an operating parameter value or range for the total reactive chlorine flux injection rate and the total reactive fluorine flux injection rate using the following procedures:
 - i. Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15-minute period during the HCl, HF, and D/F tests, determine and record the 15-

- minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- ii. Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
 - iii. Determine the total reactive chlorine flux injection rate by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using Equation 5:

$$W_t = F_1 W_1 + F_2 W_2 \quad (\text{Eq. 5})$$

Where,

W_t = Total chlorine or fluorine usage, by weight;

F_1 = Fraction of gaseous or liquid flux that is chlorine or fluorine;

W_1 = Weight of reactive flux gas injected;

F_2 = Fraction of solid reactive chloride flux that is chlorine (*e.g.*, $F = 0.75$ for magnesium chloride) or fraction of solid reactive fluoride flux that is fluorine (*e.g.*, $F = 0.33$ for potassium fluoride); and

W_2 = Weight of solid reactive flux;

- iv. Divide the weight of total chlorine or fluorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and
- v. If a solid reactive flux other than magnesium chloride or potassium fluoride is used, the owner or operator shall derive the appropriate proportion factor subject to approval by the applicable permitting authority.

[40 CFR 63.1512(k) & 40 CFR 63.1512(o)]

E4-18. The Permittee shall use the following equation to determine compliance with the emission limits in Condition **E4-2** for **PM**, **HCl**, **HF**, and **D/F**:

$$E = \frac{C * Q * K}{P}$$

Where,

E = Emission rate of PM, HCl or HF, or D/F, kg/Mg (lb/ton) of feed;

C = Concentration of PM, HCl or HF, or D/F, g/dscm (gr/dscf);

Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr);

K_1 = Conversion factor, 1 kg/1000 g (1 lb/7000 gr); and

P = Production rate, Mg/hr (ton/hr).

***Note that K_1 is not used in the equation for calculation for D/F emissions.**

[40 CFR 63.1513(b)]

E4-19. To convert D/F measurements to TEQ units, the Permittee shall use the procedures and equations in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and –Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA-625/3-89-016), incorporated by reference in Sec. 63.1502 of this subpart, available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, NTIS No. PB 90-145756.

[40 CFR 63.1513(d)]

E4-20. For a new or existing affected source subject to an emissions limit in paragraphs §63.1505(b) through (j) expressed in units of pounds per ton of feed/charge, or µg TEQ or ng TEQ per Mg of feed/charge, the permittee shall demonstrate compliance during periods of startup and shutdown through the options provided in paragraphs a. or b. Startup and shutdown emissions for group 1 furnaces and in-line fluxers must be calculated individually, and not on the basis of a SAPU. Periods of startup and shutdown are excluded from the calculation of SAPU emission limits in §63.1505(k), the SAPU monitoring requirements in §63.1510(t) and the SAPU emissions calculations in §63.1513(e).

- a. For periods of startup and shutdown, records establishing a feed/charge rate of zero, a flux rate of zero, and that the affected source or emission unit was either heated with electricity, propane or natural gas as the sole sources of heat or was not heated, may be used to demonstrate compliance with the emission limit, or
- b. For periods of startup and shutdown, divide your measured emissions in lb/hr or µg/hr or ng/hr by the feed/charge rate in tons/hr or Mg/hr from your most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data is available.

[40 CFR 63.1513(f)]

E4-21. An owner or operator wishing to change operating modes must conduct performance tests in accordance with §§63.1511 and 63.1512 to demonstrate to the permitting authority that compliance can be achieved in both modes and establish the number of cycles (or time) of operation with clean charge and no reactive flux addition necessary before changing to group 2 mode. Operating parameters relevant to each mode of operation must be established during the performance test.

- a. If the permittee elects to change from a group 1 uncontrolled furnace to a group 2 furnace, performance testing must be conducted and operating parameters established in accordance with 40 CFR 63.1514(c)(1) through (7), as applicable.
- b. Changing furnace operating mode, including reversion to the previous mode, may not be done more frequently than 4 times in any 6-month period unless you receive approval from the permitting authority or Administrator for additional changes pursuant to paragraph (c).
- c. If additional changes are needed, the owner or operator must apply in advance to the permitting authority, for major sources, or the Administrator, for area sources, for approval of the additional changes in operating mode.

[40 CFR 63.1514(c) and 40 CFR 63.1514(e)]

Recordkeeping and Reporting:

E4-22. MACT semiannual reporting periods may be synchronized with the semiannual reporting periods for this Title V permit. The semiannual reporting periods of January-June and July-December have been established and are stipulated in Condition E2(a). The permittee shall comply with all provisions of 63.1516, including but not limited to those items specified below. The MACT reports shall be submitted within 60 days after each 6-month period ends. When no deviations of parameters have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

- a. A report shall be submitted if any of these conditions occur during a 6-month reporting period:

- i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
 - ii. The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour.
 - iii. The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap shredder was not initiated within 1 hour.
 - iv. An excursion of a compliant process or operating parameter value or range (*e.g.*, lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - v. An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of this subpart.
 - vi. A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.
- b. For each affected source choosing to demonstrate compliance during periods of startup and shutdown in accordance with §63.1513(f)(1), the report must include the following certification: “During each startup and shutdown, no flux and no feed/charge were added to the emission unit, and electricity, propane or natural gas were used as the sole source of heat or the emission unit was not heated.”
- c. The owner or operator shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.
- These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.
- d. Within 60 days after the date of completing each performance test, the results of the performance tests, including any associated fuel analyses, must be submitted to the US EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). For data collected using test methods that are not supported by the EPA's ERT, the results of the performance test must be submitted to the Administrator at the appropriate address listed in §63.13.
- f. If there was a malfunction during the reporting period, the semiannual report must include the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must include a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions, including, but not limited to, product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §§63.1506(a)(5) and 63.1520(a)(8).

[40 CFR 63.1516(b) and 40 CFR 63.1516(d)]

E4-23. For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions:

- a. Any period of excess emissions, as defined in part a. of Condition E4-22, that occurred during the year were reported as required by this subpart; and
- b. All monitoring, recordkeeping, and reporting requirements were met during the year.

[40 CFR 63.1516(c)]

E4-24. As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR Part 63, Subpart RRR.

- a. The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site.
- b. The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and
- c. The Permittee may report required information on paper or on a labeled computer disk using commonly available software.

[40 CFR 63.1517(a)]

E4-25. In addition to the general records required by 40 CFR 63.10(b), the Permittee shall maintain records of:

- a. For each group 1 furnace (with or without add-on air pollution control devices), records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
- b. For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
- c. Approved site-specific monitoring plan for a group 1 furnace without add-on pollution control devices with records documenting conformance with the plan.
- d. Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
- e. Records of any alternative monitoring or test procedure.
- f. Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including;

- i. An OM&M plan; and**
 - ii. Site-specific secondary aluminum processing unit emission plan (if applicable).**
- g.** For each secondary aluminum-processing unit, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.
- h.** For any failure to meet an applicable standard, the owner or operator must maintain the following records;
 - i.** Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken.
 - ii.** Records of actions taken during periods of malfunction to minimize emissions in accordance with §§63.1506(a)(5) and 63.1520(a)(8), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- i.** For each period of startup or shutdown for which the owner or operator chooses to demonstrate compliance for an affected source, the owner or operator must comply by demonstrating compliance through i. or ii.:
 - i.** Based on a feed/charge rate of zero, a flux rate of zero and the use of electricity, propane or natural gas as the sole sources of heating or the lack of heating, a semiannual report must be submitted in accordance with §63.1516(b)(2)(vii) or the following records must be maintained:
 - (A) The date and time of each startup and shutdown;
 - (B) The quantities of feed/charge and flux introduced during each startup and shutdown; and
 - (C) The types of fuel used to heat the unit, or that no fuel was used, during startup and shutdown; or
 - ii.** Based on performance tests, the owner or operator must maintain the following records:
 - (A) The date and time of each startup and shutdown;
 - (B) The measured emissions in lb/hr or µg/hr or ng/hr;
 - (C) The measured feed/charge rate in tons/hr or Mg/hr from your most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data is available; and
 - (D) An explanation to support that such conditions are considered representative startup and shutdown operations.
- j.** For owners or operators that choose to change furnace operating modes, the following records must be maintained:
 - i.** The date and time of each change in furnace operating mode, and
 - ii.** The nature of the change in operating mode (for example, group 1 uncontrolled furnace processing other than clean charge to group 2).

[40 CFR 63.1517(b)]

E5. State Only Requirements for the Melting & Casting Operations

Note- for permitting purposes, Casting Furnace 2 (**Ref. No. 80-0009-03**) and Casting Furnace 4 (**Ref. No. 80-0009-10**) are combined in this section. However, they are actually two separate “process emission sources” as this term is defined at 1200-03-02-.01(qq).

- E5-1.** Particulate matter emitted from each Casting Furnace **02** and Casting Furnace **04** shall not exceed **17.54** pounds per hour each, averaged over one cycle.

TAPCR 1200-03-07-.02 - (Table 1)

Compliance Method: Compliance is demonstrated through source emissions tests conducted on the Aluminum Melting Furnace in accordance with the requirements of 40 CFR 63 Subpart RRR. Compliance with the emission limits in 40 CFR Subpart RRR ensures compliance with this emission limit since furnace emissions at maximum throughput capacity would be significantly below this limit. **This emission factor may be revised upon receipt and acceptance by the Technical Secretary of more recent test data, which indicates compliance with the applicable regulations.**

Calculation of emissions for fee purposes: Emissions will be determined from procedures indicated in Condition **E5-4**.

- E5-2.** Visible emissions from stacks and building openings shall not exceed 20% opacity as specified in Rule 1200-03-05-.01 of the Tennessee Air Pollution Control Regulations (aggregate count). Visible emissions will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.
TVEE method 2 for both units.

TAPCR 1200-03-05-.01

Compliance Method: Compliance shall be demonstrated through Method 2 and utilization of the Division’s opacity matrix dated June 18, 1996 (**Attachment 1**) and by assuring that visibly painted scrap and visibly oily scrap do not exceed 14% of the total process input based on a daily average as determined by weight. The facility shall calculate the percentage of total daily process input in a given day for each operating day and will maintain a log of that percentage. For purposes of this condition, “visually painted scrap” shall mean scrap in which more than 50% of the surface area is covered by paint as determined by visual inspection. “Visibly oily scrap” is defined as any scrap on which free liquid petroleum product can be detected on more than 50% of the surface area by visual inspection. The fraction of “Visibly oily scrap” shall be monitored and recorded for each day of operation in the table in condition **E5-3** below.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring (Opacity Matrix) for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E5-3.** The process input rate for each of the furnaces, #2 and #4 shall not exceed **420,000** pounds per day, on a daily average basis. This value includes all aluminum (clean- billets/ingots and also scrap) and flux usage. Should the permittee need to modify the source in a manner that increases the maximum material input rate a construction permit shall be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

Compliance Method: Compliance shall be assured by maintaining daily records of metal output / production rates from furnaces #2 and #4 and also total flux input. The metal output rate will serve as the metal input rate because the amount of material burned off or oxidized from the aluminum is expected to be minimal. These logs must be submitted in accordance with condition **E2** of this permit. Compliance shall be by maintaining the following log or any other format that provide same information. A separate log for furnace #2 and #4 must be maintained.

SAMPLE MONTHLY LOG FOR SOURCES 80-0009-03 & 80-0009-10

Furnace ID _____

A. DATE	B. DAILY METAL OUTPUT/ PRODUCTION RATE, TONS	C. DAILY FLUX INPUT RATE, POUNDS	D. DAILY TOTAL, COMBINATION OF COLUMN B AND C, POUNDS, FOR ONE DAY	E. PERCENTAGE INPUT OF VISIBLY PAINTED SCRAP AND VISIBLY OILY SCRAP, AS A % OF TOTAL INPUT (see E5-2 for details)
For _____, 20____				

E5-4. Calculation of Emissions for Fee Purposes:

The emissions used for calculation of fees shall be based on the following procedure for the two casting furnaces. The total production in tons for both of the casting furnaces combined shall be used in the following table for the indicated pollutants:

Aluminum Production from each July 1 through the following June 30, in tons	Pollutant	Emission Factor, Pounds per Ton of Production	Pounds of Emission per Annual Accounting Period, July through following June	Comment
	PM*			
	HCl*			

Note: Emissions of **SO₂**, **VOC**, and **NO_x** from fuel combustion shall be calculated as indicated from the values specified in conditions **E2(d)-6**.

*Emission factors used (in pounds of PM per ton of production or pounds of HCl per ton of production) will be obtained from the most recent performance test conducted on one of the Casting Furnaces (with Sidewell

Stack) to demonstrate compliance with the National Emission Standards for HAP emissions, (40 CFR 63 Subpart RRR).

As of the issuance of this permit, the assurance of compliance with the National Emission Standards for HAP emissions, (40 CFR 63 Subpart RRR) shall be based on the most recent emission factors of **PM emission and HCl emission**. These emission factors are established during repeat performance testing as required by 40 CFR 63 Subpart RRR on Casting Furnace No. 2 with Sidewell Stack. **These emission factors may be revised upon receipt and acceptance by the Technical Secretary of more recent test data which indicates compliance with the applicable regulations.**

80-0009-06: Metal Parts Coating Line - Four ESD Spray Booths with Exhaust Filters and Natural Gas and Propane-Fired Regenerative Thermal Oxidizer Control exhausting to Stack S-ROX – One Bypass Stack S-BYP , utilized for exhausting un-controlled emissions. Includes emissions from four Storage Tanks, a bake oven, and Mixing Room Activities.

E6. 40 CFR 63 Subpart MMMM: MACT Reporting Requirements

E6-1. The Permittee shall comply with all applicable provisions of 40 CFR Part 63, **Subpart MMMM** – “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products” and Subpart A “General Provisions” as specified in Table 2 of 40 CFR Part 63, Subpart MMMM. This includes, but is not restricted to the requirements specified in this permit.

For compliance purposes, the permittee must maintain a minimum *average* thermal oxidizer temperature, over all three-hour periods, of no less than **1,500° F**. Compliance is also based upon the capture system at this process meeting the requirements of a “Permanent Total Enclosure” with 100% capture efficiency and 99.4% Destruction Efficiency. This is based on a Division letter to the permittee dated June 11, 2004 accepting the performance testing conducted on July 24, 2001.

The above minimum *average* three-hour thermal oxidizer temperature limit may be revised upon receipt and acceptance by the Technical Secretary of more recent test data which indicates compliance with the applicable regulations.

Also, emissions of organic HAP from this source, after consideration of emissions reduction due to oxidizer control, shall not exceed the following limits:

Type of Coating	Allowable Pounds of Organic HAP emitted per gallon of Coating Solids used during each 12-month compliance period	Rule Citation
General coating	2.6	§ 63.3890(b)(1)
High Performance Coating	27.5	§ 63.3890(b)(4)

[40 CFR Part 63, Subpart A and 40 CFR Part 63, Subpart MMMM]

E6-2. Beginning after the initial compliance period specified in Conditions **E7-1** and **E7-3** ends, the permittee must submit semiannual compliance reports. MACT semiannual reporting periods may be synchronized

with the semiannual reporting periods for this Title V permit. The semiannual reporting periods of **January 1** through the following **June 30** of each year and **July 1** through the following **December 31** of each year have been established and are stipulated in Condition E2(a). The MACT reports shall be submitted within 60 days after each 6-month period ends.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.

[40 CFR §63.3920]

E6-3. The permittee's semiannual compliance report must contain the following information:

- (a) Company name and address.
- (b) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
- (c) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on **June 30** or **December 31** of each year. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.
- (d) Identification of the compliance option or options that the permittee used on each coating operation during the reporting period. If the permittee switched between compliance options during the reporting period, the permittee must report the beginning and ending dates for each option the permittee used.
- (e) If the permittee used the emission rate without add-on controls option, the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.
- (f) If there were no deviations from the emission limitations in **Condition E7-3**, the semiannual compliance report must include a statement that there were no deviations from the emission limitation during the reporting period.
- (g) Deviations: Compliant material option. If the permittee used the compliant material option and there was a deviation from the applicable emission limit in Condition E7-3, the semiannual compliance report must contain the following information:
 - (1) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used.
 - (2) The calculation of the organic HAP content (using Equation 2 of Compliance Method A in Condition E7-3) for each coating identified in Condition E6-3(g)(1). You do not need to submit background data supporting this calculation (e.g., information provided by coating suppliers or manufacturers, or test reports).

- (3) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in Condition E6-3(g)(1). You do not need to submit background data supporting this calculation (e.g., information provided by material suppliers or manufacturers, or test reports).
 - (4) A statement of the cause of each deviation.
- (h) Deviations: Emission rate without add-on controls option. If the permittee used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in **Condition E7-3**, the semiannual compliance report must contain the following information:
- (1) The beginning and ending dates of each compliance period during which, the 12-month organic HAP emission rate exceeded the applicable emission limit in **Condition E7-3**.
 - (2) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. The permittee must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of Compliance Method B in **Condition E7-3**; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to (e) of Compliance Method B in **Condition E7-3**. The permittee does not need to submit background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).
 - (3) A statement of the cause of each deviation.
- (i) Deviations: Emission rate with add-on controls option. If the permittee used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the following information. This includes periods of startup, shutdown, and malfunction during which deviations occurred.
- (1) The beginning and ending dates of each compliance period during which, the 12-month organic HAP emission rate exceeded the applicable emission limit in **Condition E7-3**.
 - (2) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of Compliance Method B in **Condition E7-3**; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to (e) of Compliance Method B in **Condition E7-3**; the calculation of the total volume of coating solids used each month using Equation 2 of Compliance Method B in **Condition E7-3**; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of Compliance Method C in **Condition E7-3**, and Equations 2, 3, and 3A through 3C of Compliance Method C in **Condition E7-3**, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of Compliance Method C in **Condition E7-3**; and the calculation of the 12-month organic HAP emission rate using Equation 5 of Compliance Method C in **Condition**

E7-3. You do not need to submit the background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).

- (3) The date and time that each malfunction started and stopped.
 - (4) A brief description of the CPMS.
 - (5) The date of the latest CPMS certification or audit.
 - (6) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.
 - (7) The date, time, and duration that each CPMS was out-of-control, including the information in 40 CFR §63.8(c)(8).
 - (8) The date and time period of each deviation from an operating limit in **Attachment 4** of this permit; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.
 - (9) A summary of the total duration of each deviation from an operating limit in **Attachment 4** of this permit and each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.
 - (10) A breakdown of the total duration of the deviations from the operating limits in **Attachment 4** of this permit and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
 - (11) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.
 - (12) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.
 - (13) For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation, and the actions you took to correct the deviation.
 - (14) A statement of the cause of each deviation.
- (j) Performance test reports. If you use the emission rate with add-on controls option, you must submit reports of performance test results for emission capture systems and add-on control devices to the Technical Secretary no later than 60 days after completing the tests.

E7. 40 CFR 63 Subpart Mmmm: MACT Compliance Requirements

E7-1. The compliance date for the permittee's affected source was **January 2, 2007**. The initial compliance period extended through **January 30, 2008**. See Condition **E2-(a)(4)** for MACT reporting requirements.

E7-2. All affected sources (**80-0009-06**) at this facility shall comply with all applicable requirements of 40 CFR 63, Subpart Mmmm – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts as required by 40 CFR 63, Subpart Mmmm. An affected source is the collection of the following items that are used for surface coating of miscellaneous metal parts and products:

- (a) All coating operations. Coating operations means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a given quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of Subpart Mmmm.
- (b) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
- (c) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and
- (d) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

[40 CFR §63.3882(a) and (b)]

- E7-3.**
- (a) The permittee must limit their organic HAP emissions to the atmosphere from each existing general coating affected source to no more than **2.6** pounds of organic HAP emitted per gallon of coating solids used during each 12-month compliance period.
 - (b) The permittee must limit their organic HAP emissions to the atmosphere from each existing high performance coating affected source to no more than **27.5** pounds of organic HAP emitted per gallon of coating solids used during each 12-month compliance period.

[40 CFR §63.3890(b)(1) & 40 CFR §63.3890(b)(4)]

The permittee may choose any of the following three options for the purposes of compliance with this condition.

Compliance Method A (Compliant Material Option): The permittee must demonstrate that the organic HAP content of each coating used in the coating operation is less than or equal to the applicable emission limit, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. To demonstrate compliance with the applicable emission limit using the compliant material option, the permittee must:

- (a) *Determine the mass fraction of organic HAP for each material used.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the following options:
 - (1) *Method 311*
 - (i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)- defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (e.g., 0.3791).
 - (ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (e.g., 0.763).
 - (2) *Method 24.* For coatings, the permittee may use Method 24 to determine the mass fraction of non-aqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAPs react to form solids and are not emitted to the atmosphere, the permittee may use the alternative method (**Attachment 3**).
 - (3) *Alternative method.* You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in § 63.7(f) to submit an alternative test method for approval.
 - (4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified above, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to the procedures above, then the test method results will take precedence unless, after consultation, you demonstrate to the satisfaction of the Division that the formulation data are correct.
 - (5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAPs which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, the permittee may use the default values for the mass fraction of organic HAPs in these solvent blends listed in Tables 3 or 4 of **Attachment 2**. If the permittee uses Table 3 in **Attachment 2**, the permittee must use the values in Table 3 for all solvent blends that match Table 3 entries according to the instructions for Table 3, and the permittee may use Table 4 only if the solvent blends in the materials the permittee uses do not match any of the solvent blends in Table 3 and the permittee knows only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Tables 3 or 4 in **Attachment 2**, the Method 311 results will take precedence unless, after consultation, the permittee demonstrates to the satisfaction of the Division that the formulation data are correct.
- (b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified below. If test results obtained according to (b)(1) of Compliance Method A in **Condition E7-3** do not agree with the information obtained under (b)(3) or (b)(4) of Compliance Method A in **Condition E7-3**, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the Division that the formulation data are correct.

- (1) *ASTM Method D2697–86 (Reapproved 1998) or ASTM Method D6093–97 (Reapproved 2003).* You may use ASTM Method D2697–86 (Reapproved 1998), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” (incorporated by reference, see § 63.14), or ASTM Method D6093–97 (Reapproved 2003), “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” (incorporated by reference, see § 63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.
- (2) *Alternative method.* You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in § 63.7(f) to submit an alternative test method for approval.
- (3) *Information from the supplier or manufacturer of the material.* You may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.
- (4) *Calculation of volume fraction of coating solids.* You may determine the volume fraction of coating solids using Equation 1 of Compliance Method A:

$$V_s = 1 - \frac{m_{\text{volatiles}}}{D_{\text{avg}}} \quad \text{Equation 1}$$

Where: V_s = Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating.

$m_{\text{volatiles}}$ = Total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating.

D_{avg} = Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see § 63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the Division that the formulation data are correct.

- (c) *Determine the density of each coating.* Determine the density of each coating used during the compliance period from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see § 63.14), information from the supplier or manufacturer of the material, or specific gravity data for pure chemicals. If there is disagreement between ASTM Method D1475–98 test results and the supplier’s or manufacturer’s information, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the Division that the formulation data are correct.
- (d) *Determine the organic HAP content of each coating.* Calculate the organic HAP content, kg (lb) of organic HAP emitted per liter (gal) coating solids used, of each coating used during the compliance period using Equation 2 of Compliance Method A:

$$H_c = \frac{(D_c)(W_c)}{V_s} \quad \text{Equation 2}$$

Where: H_c = Organic HAP content of the coating, kg organic HAP emitted per liter (gal) coating solids used.

D_c = Density of coating, kg coating per liter (gal) coating, determined according to (c) of Compliance Method A.

W_c = Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to (a) of Compliance Method A.

V_s = Volume fraction of coating solids, liter (gal) coating solids per liter (gal) coating, determined according to (b) of Compliance Method A.

- (e) *Continuous compliance demonstration.* For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content (determined using Equation 2 of Compliance Method A) exceeds the applicable emission limit, and use no thinner and/or other additive, or cleaning material that contains organic HAP,

determined according to (a) of Compliance Method. A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in **Condition E7-1**, is the end of a compliance period consisting of that month and the preceding 11 months. The use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in (a) of Compliance Method A is a deviation from the emission limitations that must be reported as specified in **Condition E6-3**. You must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the applicable emission limit, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coatings for which the organic HAP content exceeded the applicable emission limit, and you used no thinner and/or other additive, or cleaning material that contained organic HAP, determined according to (a) of Compliance Method A. You must maintain records as specified in **Conditions E7-10 and E7-11**.

Compliance Method B (*Emission Rate without Add-On Controls Option*): The permittee must demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operations is less than or equal to the limit, calculated as a rolling 12-month emission rate and determined on a monthly basis. To demonstrate compliance with the applicable emission limit using the emission rate without add-on controls option, the permittee must:

- (a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the procedures in **(a) of Compliance Method A**.
- (b) *Determine the volume fraction of coating solids.* Determine the volume fraction of coating solids (gallon of coating solids per gallon of coating) for each coating used during each month according to the procedures in **(b) of Compliance Method A**.
- (c) *Determine the density of each material.* Determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If the permittee is including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965–02, “Standard Test Methods for Specific Gravity of Coating Powders” (incorporated by reference, see §63.14), or information from the supplier. If there is disagreement between ASTM Method D1475–98 or ASTM Method D5965–02 test results and other such information sources, the test results will take precedence unless, after consultation, the permittee demonstrates to the satisfaction of the Division that the formulation data are correct. If the permittee purchases materials or monitors consumption by weight instead of volume, the permittee does not need to determine material density. Instead, the permittee may use the material weight in place of the combined terms for density and volume in **Equations 1A, 1B, 1C, and 2** of Compliance Method B.
- (d) *Determine the volume of each material used.* Determine the volume (gallons) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If the permittee purchases materials or monitors consumption by weight instead of volume,

the permittee does not need to determine the volume of each material used. Instead, the permittee may use the material weight in place of the combined terms for density and volume in **Equations 1A, 1B, and 1C** of Compliance Method B.

- (e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using equation 1 below.

$$H_e = A + B + C - R_w \quad \text{Equation 1}$$

Where:

H_e = Total mass of organic HAP emissions during the month, lb.

A = Total mass of organic HAP in the coatings used during the month, lb., as calculated in equation 1A.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, lb., as calculated in equation 1B.

C = Total mass of organic HAP in the cleaning materials used during the month, lb., as calculated in equation 1C.

R_w = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste treatment, storage and disposal facility (TSDF) for treatment or disposal during the month, lb., determined according to the following four items:

- (1) The permittee may only include waste materials in the determination that are generated by coating operations in the affected source for which the permittee uses equation 4 and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. The permittee may not include organic HAP contained in wastewater.
- (2) The permittee must determine either the amount of the waste materials sent to a TSDF during the month or the amount collected and stored during the month and designated for future transport to a TSDF. The permittee can not include in the determination any waste materials sent to a TSDF during a month if the permittee has already included them in the amount collected and stored during that month or a previous month.
- (3) The permittee must determine the total mass of organic HAP contained in the waste materials specified above in **(e)(2) of Compliance Method B**.
- (4) The permittee must document the methodology the permittee uses to determine the amount of waste materials and the total mass of organic HAP they contain. If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

NOTE: The permittee may assign a value of zero to R_w if the permittee does not want to use this allowance.

$$A = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i}) \quad \text{(Equation 1A for calculating the lb. organic HAP in the coatings used during the month)}$$

Where:

A = Total mass of organic HAP in the coatings used during the month, lb.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, gallons.

$D_{c,i}$ = Density of coating, i, lb. coating per gallon coating.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, lb. organic HAP per lb. coating.

m = Number of different coatings used during the month.

$$B = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad \text{(Equation 1B for calculating the lb. organic HAP in the thinners and/or other additives used during the month)}$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, lb.

$Vol_{t,j}$ = Total volume of thinners and/or other additives, j, used during the month, gallons.

$D_{t,j}$ = Density of thinners and/or other additives, j, lb. coating per gallon coating.

$W_{t,j}$ = Mass fraction of organic HAP in thinners and/or other additives, j, lb. organic HAP per lb. thinners and/or other additives.

n = Number of different thinners and/or other additives used during the month.

$$C = \sum_{k=1}^p (Vol_{s,k})(D_{s,k})(W_{s,k}) \quad \text{(Equation 1C for calculating the lb. organic HAP in the cleaning materials used during the month)}$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, lb.

$Vol_{s,k}$ = Total volume of cleaning materials, k, used during the month, gallons.

$D_{s,k}$ = Density of cleaning materials, k, lb. cleaning materials per gallon cleaning materials.

$W_{s,k}$ = Mass fraction of organic HAP in cleaning materials, k, lb. organic HAP per lb. cleaning materials.

p = Number of different cleaning materials used during the month.

- (f) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, gallons, which is the combined volume of coating solids for all the coatings used during each month, using Equation 2 below:

$$V_{st} = \sum_{i=1}^m (Vol_{c,i})(V_{s,i}) \quad \text{Equation 2}$$

Where:

V_{st} = Total volume of coating solids used during the month, gallons.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, gallons.

$V_{s,i}$ = Volume fraction of coating solids for coating, i, gallons solids per gallon coating, determined according to **(b) of Compliance Method B**.

m = Number of coatings used during the month.

- (g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, lb. organic HAP emitted per gallon coating solids used, using Equation 3 of this permit condition:

$$H_{yr} = \frac{\sum_{y=1}^n H_e}{\sum_{y=1}^n V_{st}} \quad \text{Equation 3}$$

Where:

H_{yr} = Average organic HAP emission rate for the compliance period, lb. organic HAP emitted per gallon coating solids used.

H_e = Total mass of organic HAP emissions from all materials used during month, y, lb., as calculated by Equation 1 of this Compliance Method B.

V_{st} = Total volume of coating solids used during month, y, gallons, as calculated by Equation 2 of this Compliance Method B.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

- (h) *Continuous compliance demonstration.* For each compliance period to demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to Compliance Method B, must be less than or equal to the emission limit. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in **Condition E7-1** is the end of a compliance period consisting of that month and the preceding 11 months. The permittee must perform the calculations in Compliance Method B on a monthly basis using data from the previous 12 months of operation. If the organic HAP emission rate for any 12-month compliance period exceeded the emission limit, this is a deviation from the emission limitation for that compliance period and must be reported as specified in **Condition E6-3**. The permittee must identify the coating operation(s) for which the permittee used the emission rate without add-on controls option. If there were no deviations from the emission limitations, the permittee must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the emission limit, determined according to Compliance Method B. The permittee must maintain records as specified in **Conditions E7-10 and E7-11**.

Compliance Method C (Emission Rate with Add-On Controls Option): All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the compliance date specified in **Condition E7-1**. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to (e) of **Compliance Method C**, you must conduct a performance test of each capture system and add-on control device according to the procedures in **Attachment 5** and establish the operating limits required by **Condition E7-5** no later than the compliance date specified in **Condition E7-1**. For a solvent recovery system for which you conduct liquid-liquid material balances (e) of **Compliance Method C**, you must initiate the first material balance no later than the compliance date specified in **Condition E7-1**.

The permittee must demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operations is less than or equal to the emission limit, calculated as a rolling 12-month emission rate and determined on a monthly basis. The permittee must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in **Condition E7-5**, except for solvent recovery systems for which you conduct liquid-liquid material balances **according to (e) of Compliance Method C**, and that you meet the work practice standards required in **Condition E7-7**. You must meet all the requirements of **Conditions E7-3, E7-5, E7-6, E7-7, E7-12**, and the applicable provisions detailed in **Attachment 5** to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

The coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in **Condition E7-3**, operating limits in **Condition E7-5**, and work practice standards in **Condition E7-7**. You must conduct a separate compliance demonstration for each general use and high performance coating operation. You must meet all the requirements described in compliance method option C. When calculating the organic HAP emission rate according to this compliance method option C, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use this compliance option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

- (a) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures (a) through (d) specified in Compliance Option B to determine the mass fraction of organic HAP, density, and volume of each coating, thinner and/or other additive, and cleaning material used during each month; and the volume fraction of coating solids for each coating used during each month.
- (b) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of Compliance Option B, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and/or other additives, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

- (c) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures described in (d) of Compliance Option C to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures described in (e) of Compliance Option C to calculate the organic HAP emission reduction.
- (d) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance.* Use Equation 1 of this Compliance Option C to calculate the organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device for any period of time a deviation specified in either (c) or (d) **under Compliance Method C of Condition E7-3** occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Technical Secretary. Equation 1 below treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = (A_C + B_C + C_C - R_W - H_{UNC}) \left(\frac{CE}{100} \times \frac{DRE}{100} \right) \quad \text{Equation 1}$$

Where:

H_C = Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of Compliance Option C.

B_C = Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg, as calculated in Equation 1B of Compliance Option C.

C_C = Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, as calculated in Equation 1C of Compliance Option C.

R_w = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to (e) of Compliance Method B. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

H_{UNC} = Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in (c) or (d) under **Compliance Method C of Condition E7-3** that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of Compliance Option C.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in **Attachment 5** of this permit to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in **Attachment 5** of this permit to measure and record the organic HAP destruction or removal efficiency.

- (1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg (1b), using Equation 1A below:

$$A_C = \sum_{i=1}^m (Vol_{c,i})(D_{c,i})(W_{c,i})$$

Equation 1A

Where:

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

m = Number of different coatings used.

- (2) Calculate the mass of organic HAP in the thinners and/or other additives used in the controlled coating operation, kg (lb), using Equation 1B below:

$$B_C = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) (W_{t,j}) \quad \text{Equation 1B}$$

Where:

B_C = Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$ = Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$ = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

n = Number of different thinners and/or other additives used.

- (3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg (lb), using Equation 1C below:

$$C_C = \sum_{k=1}^p (Vol_{s,k}) (D_{s,k}) (W_{s,k}) \quad \text{Equation 1C}$$

Where:

C_C = Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$ = Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$ = Density of cleaning material, k, kg per liter.

$W_{s,k}$ = Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

- (4) Calculate the mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used in the controlled coating operation during deviations specified in (c) or (d) under **Compliance Method C of Condition E7-3**, using Equation 1D below:

$$H_{UNC} = \sum_{h=1}^q (Vol_h)(D_h)(W_h)$$

Equation 1D

Where:

H_{UNC} = Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in (c) or (d) under **Compliance Method C of Condition E7-3** that occurred during the month in the controlled coating operation, kg.

Vol_h = Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

D_h = Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

W_h = Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

- (e) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified below. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in Equation 3 below.

- (1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ± 2.0 percent of the mass of volatile organic matter recovered.
- (2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, based on measurement with the device required in (e)(1) above.
- (3) Determine the mass fraction of volatile organic matter for each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.
- (4) Determine the density of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to (c) of Compliance Method B.
- (5) Measure the volume of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.
- (6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^m Vol_i D_i WV_{c,i} + \sum_{j=1}^n Vol_j D_j WV_{t,j} + \sum_{k=1}^p Vol_k D_k WV_{s,k}}$$

Equation 2

Where:

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

M_{VR} = Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

Vol_i = Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_i = Density of coating, i, kg per liter.

$WV_{c,i}$ = Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

Vol_j = Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_j = Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$ = Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

Vol_k = Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_k = Density of cleaning material, k, kg per liter.

$WV_{s,k}$ = Mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

- (7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equations 3, 3A, 3B, and 3C below:

$$H_{CSR} = (A_{CSR} + B_{CSR} + C_{CSR}) \left(\frac{R_V}{100} \right) \quad \text{Equation 3}$$

Where:

H_{CSR} = Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

A_{CSR} = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A below.

B_{CSR} = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B below.

C_{CSR} = Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3C below.

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this Compliance Method C.

$$A_{CSR} = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i})$$

Equation 3A to calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg.

Where:

A_{CSR} = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

m = Number of different coatings used.

$$B_{CSR} = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) (W_{t,j})$$

Equation 3B to calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system. kg.

Where:

B_{CSR} = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$ = Total volume of thinner and/or other additive, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$ = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive, j, kg lb organic HAP per kg thinner and/or other additive. For reactive adhesives, use the mass fraction of organic HAP that is emitted as determined using the method in **Attachment 3** of this permit.

n = Number of different thinners and/or other additives used.

$$C_{CSR} = \sum_{k=1}^p (Vol_{s,k}) (D_{s,k}) (W_{s,k})$$

Equation 3C to calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

Where:

C_{CSR} = Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{s,k}$ = Total volume of cleaning material, k, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{s,k}$ = Density of cleaning material, k, kg per liter.

$W_{s,k}$ = Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg cleaning material.

p = Number of different cleaning materials used.

- (f) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of Compliance Method B.
- (g) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 4 below:

$$H_{HAP} = H_e - \sum_{i=1}^q (H_{c,i}) - \sum_{j=1}^r (H_{CSR,j}) \quad \text{Equation 4}$$

Where:

H_{HAP} = Total mass of organic HAP emissions for the month, kg.

H_e = Total mass of organic HAP emissions before add-on controls from all the coatings, thinners and/or other additives, and cleaning materials used during the month, kg, determined using Equation 1 of Compliance Method B.

$H_{C,i}$ = Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of Compliance Method C.

$H_{CSR,j}$ = Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of Compliance Method C.

q = Number of controlled coating operations not controlled by a solvent recovery system using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

- (h) *Calculate the organic HAP emission rate for the compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per liter (gal) coating solids used, using Equation 5 below:

$$H_{annual} = \frac{\sum_{y=1}^n H_{HAP,y}}{\sum_{y=1}^n V_{st,y}} \quad \text{Equation 5}$$

Where:

H_{annual} = Organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

$H_{HAP,y}$ = Organic HAP emissions for month, y, kg, determined according to Equation 4 of Compliance Method C.

$V_{st,y}$ = Total volume of coating solids used during month, y, liters, from Equation 2 of Compliance Method B.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

- (i) **Continuous compliance demonstration.** For each compliance period to demonstrate continuous compliance with the applicable emission limit, the organic HAP emission rate for each compliance period, determined according to the procedures in Compliance Method C, must be equal to or less than the applicable emission limit. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in **Condition E7-1** is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in Compliance Method C on a monthly basis using data from the previous 12 months of operation. If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit, this is a deviation from the emission limitation for that compliance period that must be reported as specified in **Condition E6-3**.

You must demonstrate continuous compliance with each operating limit required by **Condition E7-5** that applies to you, as specified in **Attachment 4**, when the coating line is in operation.

- (1) If an operating parameter is out of the allowed range specified in **Attachment 4**, this is a deviation from the operating limit that must be reported as specified in **Condition E6-3**.

- (2) If an operating parameter deviates from the operating limit specified in **Attachment 4**, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Technical Secretary.

You must meet the requirements for bypass lines in **Condition E7-6** for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in **Condition E6-3**. For the purposes of completing the compliance calculations specified in Compliance Method C, you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of Compliance Method C.

You must demonstrate continuous compliance with the work practice standards in **Condition E7-7**. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by **Condition E7-10(j)** this is a deviation from the work practice standards that must be reported as specified in **Condition E6-3**.

You must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit, and you achieved the operating limits required by **Condition E7-5** and the work practice standards required by **Condition E7-7** during each compliance period. You must maintain records as specified in **Conditions E7-10 and E7-11**.

- E7-4.** (a) For any coating operation(s) on which Compliance Method A or Compliance Method B of **Condition E7-3** are used, the permittee must be in compliance at all times with the emission limits of **Condition E7-3**.
- (b) For any controlled coating operation(s) on which Compliance Method C of **Condition E7-3** is used, the coating operation(s) must be in compliance with the emission limits in **Conditions E7-3** at all times except during periods of startup, shutdown, and malfunction. The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices in **Condition E7-5** at all times except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to (e) of **Compliance Method C**. The coating operation(s) must be in compliance with work practice standards in **Condition E7-7** at all times.
- (c) The permittee may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. The permittee may include both controlled and uncontrolled coating operations in a group for which this option is used.

[40 CFR §63.3900(a)(1), 40 CFR §63.3900(a)(2) & 40 CFR §63.3961]

Operating and Monitoring Requirements:

- E7-5.** (a) For any coating operation(s) on which Compliance Method A or Compliance Method B of **Condition E7-3** are used, the permittee is not required to meet any operating limits.
- (b) For any controlled coating operation(s) on which Compliance Method C of **Condition E7-3** is used, except those for which a solvent recovery system is used and a liquid-liquid material balance is conducted according to **(e) of Compliance Method C**, the permittee must meet the operating limits specified in **Attachment 4** of this permit. These operating limits apply to the emission capture and control systems on the coating operation(s) that are used for this option, and the permittee must establish the operating limits during the performance test accordingly. The permittee must meet the operating limits at all times after they are established.
- (c) If an add-on control device other than those listed in **Attachment 4** of this permit are used, or an alternative parameter and different operating limit is sought, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR §63.8(f).

[40 CFR §63.3892]

Compliance Method: Except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of **(e) of Compliance Method C**, you must establish and demonstrate continuous compliance during the initial compliance period. During the required performance test described in **Attachment 5** of this permit, you must establish the operating limits based on the type of add-on control device as described below, unless you have received approval for alternative monitoring and operating limits under 40 CFR §63.8(f).

- (a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits as described below.
- (1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.
 - (2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.
- (b) *Emission capture systems.* For each capture device that is a PTE according to §63.3965(a), the operating limits are described below:
- (1) The direction of the air flow at all times must be into the enclosure; and either
 - (2) i. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minutes; or
ii. The pressure drop across the enclosure must be at least 0.007 inches H₂O, as established in Method 204 of appendix M to 40 CFR Part 51.

- E7-6.** For any controlled coating operation(s) on which Compliance Method C of **Condition E7-3** is used, the permittee must install, operate, and maintain the respective continuous parameter monitoring system (CPMS) listed in **Attachment 6** according to the respective compliance methods listed in **Attachment 6**.

[40 CFR §63.3968]

- E7-7.** (a) For any coating operation(s) on which Compliance Method A or Compliance Method B of **Condition E7-3** are used, the permittee is not required to meet any work practice standards.

- (b) For any controlled coating operation(s) on which Compliance Method C of **Condition E7-3** is used, the permittee must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by the controlled coating operation(s) for which this option is used; or the permittee must meet an alternative standard as provided in **Condition E7-7(c)**. The plan must specify practices and procedures to ensure that, at a minimum, the following specified elements are implemented.
- (1) All organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.
 - (2) Spills of organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized.
 - (3) Organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.
 - (4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.
 - (5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.
- (c) As provided in 40 CFR §63.6(g), the Administrator may choose to grant permission to use an alternative to the work practice standards in this condition.

Compliance Method: You must develop and begin implementing the work practice plan no later than the compliance date specified in **Condition E7-1**. You must develop, implement, and document your implementation of the work practice plan during the initial compliance period, as specified in **Condition E7-10(j)(7)**.

[40 CFR §63.3893]

- E7-8.** The permittee must always operate and maintain the affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in 40 CFR §63.6(e)(1)(i).

[40 CFR §63.3900(b)]

- E7-9.** For any controlled coating operation(s) on which the emission rate with add-on controls option (**Compliance Method C of Condition E7-3**) is used, the permittee must develop a written startup, shutdown, and malfunction plan according to the provisions in 40 CFR §63.6(e)(3). The plan must address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

[40 CFR §63.3900(c)]

Recordkeeping Requirements:

- E7-10.** The permittee must collect and keep records of the data and information specified below. Failure to collect and keep the following records is a deviation from the standard:
- (a) A copy of each notification and report that the permittee submitted to comply with 40 CFR 63 Subpart MMMM, and the documentation supporting each notification and report.

- (b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the volume fraction of coating solids for each coating. If the permittee conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, the permittee must keep a copy of the complete test report. If the permittee uses information provided to the permittee by the manufacturer or supplier of the material that was based on testing, the permittee must keep the summary sheet of results provided to the permittee by the manufacturer or supplier. The permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier.
- (c) For each compliance period, the records specified below:
- (1) A record of the coating operations on which the permittee used each compliance option and the time periods (beginning and ending dates and times) for each option the permittee used.
 - (2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using **Equation 2 of Compliance Method A of Condition E7-3**.
 - (3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using **Equations 1, 1A through 1C, and 2 of Compliance Method B of Condition E7-3**; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to **(e) of Compliance Method B in Condition E7-3**; the calculation of the total volume of coating solids used each month using **Equation 2 of Compliance Method B in Condition E7-3**; and the calculation of each 12-month organic HAP emission rate using **Equation 3 of Compliance Method B in Condition E7-3**.
 - (4) For the emission rate with add-on controls option, records of the calculations specified below.
 - (i) The calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using **Equations 1 and 1A through 1C of Compliance Method B of Condition E7-3** and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to **(e) of Compliance Method B in Condition E7-3**;
 - (ii) The calculation of the total volume of coating solids used each month using **Equation 2 of Compliance Method B of Condition E7-3**;
 - (iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using **Equations 1 and 1A through 1D of Compliance Method C of Condition E7-3** and **Equations 2, 3, and 3A through 3C of Compliance Method C of Condition E7-3**, as applicable;
 - (iv) The calculation of each month's organic HAP emission rate using **Equation 4 of Compliance Method C of Condition E7-3**; and

- (v) The calculation of each 12-month organic HAP emission rate using **Equation 5 of Compliance Method C of Condition E7-3**.
- (d) A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period.
- (e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight.
- (f) A record of the volume fraction of coating solids for each coating used during each compliance period.
- (g) If the permittee uses either the emission rate without add-on controls or emission rate with add-on controls option, the density for each coating, thinner and/or other additive, and cleaning material used during each compliance period.
- (h) If the permittee uses an allowance for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to **(e) of Compliance Method B in Condition E7-3**, the permittee must keep records of the following:
 - (1) The name and address of each TSDF to which the permittee sent waste materials for which the permittee uses an allowance in **(e) of Compliance Method B in Condition E7-3**; a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the permittee; and the date of each shipment.
 - (2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which the permittee used the allowance for these materials in **(e) of Compliance Method B in Condition E7-3**.
 - (3) The methodology used in accordance with **(e) of Compliance Method B in Condition E7-3** to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.
- (i) The permittee must keep records of the date, time, and duration of each deviation.

- (j) If the emission rate with add-on controls option is used, the permittee must keep the records specified below.
- (1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.
 - (2) The records in 40 CFR §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
 - (3) The records required to show continuous compliance with each applicable operating limit specified in **Attachment 4**.
 - (4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in **§63.3965(a) of Attachment 5**.
 - (5) The records specified below for each add-on control device organic HAP destruction or removal efficiency determination as specified in **§63.3966 of Attachment 5**.
 - (i) Records of each add-on control device performance test conducted according to **§63.3964 and 63.3966 in Attachment 5**.
 - (ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.
 - (6) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in **Condition E7-5** and to document compliance with the operating limits as specified in **Attachment 4**.

- (7) A record of the work practice plan required by **Condition E7-7** and documentation that you are implementing the plan on a continuous basis.

[40 CFR § 63.3930]

- E7-11.** The permittee must maintain the records described in **Condition E7-10** in a form suitable and readily available for expeditious review by the Technical Secretary or a Division representative. Where appropriate, the records may be maintained as electronic spreadsheets or as a database. The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record and may keep the records off-site for the remaining 3 years.

[40 CFR § 63.3931]

- E7-12.** The Permittee may elect to comply with the requirements of 40 CFR 63 Subpart MMMM in accordance with any compliance option established within the subpart provided that necessary records are maintained to demonstrate compliance and the compliance option elected is reported in each semiannual report.

E8. State Only Requirements for Coating Operations (80-0009-06)

- E8-1.** Particulate matter emitted from this source shall not exceed **0.02** grains per dry standard cubic foot (**3.9 lb/hr**).

TAPCR 1200-03-07-.04(1)

Compliance Method: Compliance with this requirement shall be assured through the use of exhaust filters (filter pads) to control particulate emissions. The process shall not operate without the use of said control. A log of daily monitoring of the control system that assures the integrity of the exhaust filter system shall be kept. Also, a log shall be kept denoting the actual day(s) that filters were replaced.

Calculation of Particulate Emissions for Fee Purposes:

The particulate emissions from the two ESD Spray Booths associated with this line shall be calculated for fee purposes using the following procedure.

For each Coating, for the Annual Accounting Period (AAP) of July 1 through the following June 30:

Gallons of coating used x pounds of solid per gallon for each coating = **Total pounds of solid sprayed**
Add together the total pounds of solids sprayed from all different coatings for the AAP.

Total pounds of all solids sprayed for the AAP x overspray fraction x (1- filter control fraction) = **pounds of solids emissions over the AAP.**

- E8-2.** Visible emissions from this source shall not exhibit greater than twenty percent opacity, except for one six-minute period in any one hour period, and for no more than four six-minute periods in any twenty-four hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996 that is enclosed as **Attachment 1**.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

- E8-3.** Volatile organic compounds emitted from this source shall not exceed **184.0** tons during any twelve consecutive months. This emission limitation has been established pursuant to TAPCR 1200-03-09-.01 and agreement letter signed by the permittee on August 3, 2000 to avoid a PSD review for Volatile Organic Compounds.

Compliance Method and Fee Calculations: Compliance with the above requirements shall be determined by keeping a log of the paint and solvent usages. Emissions shall be calculated in tons of VOCs during each interval of 12 consecutive months. A log of information in the following format (or another format providing the same information) shall be maintained at the source location and kept available for inspection by the Technical Secretary or a Division representative. This log shall be retained for a period of not less than five years.

MONTHLY VOC EMISSION LOG FOR SOURCE 80-0009-06:

MONTH/YEAR:

Application	Material Usage (gal/mo)	VOC Content (lb/gal)	Uncontrolled VOC Emissions (lb/mo)	Oxidizer Overall Emission Reduction Efficiency ¹	VOCs Emitted ² (lb/mo)	VOCs EMITTED ³ (ton/mo)	VOCs Emitted in last 12 Consecutive Months ⁴ (ton/yr)
High Performance Architectural Coating					[from logs in Condition E8-4]		
Extreme Performance Coating					[from logs in Condition E8-4]		
Other Coating Classifications					[from logs in Condition E8-4]		
Cleaner (1)							
Cleaner (2), etc.							
Other Materials							
TOTAL							

1. The oxidizer overall emission reduction efficiency shall be calculated from capture and destruction efficiency values obtained during the most recent performance test approved by the Division. If the oxidizer is not used during spray painting, the control efficiency shall be zero. If no record of the temperature is available, the control efficiency shall be zero for that time period of missing temperatures. The overall destruction efficiency shall be utilized in the VOC emissions calculation only when the minimum thermal oxidizer temperature, averaged over each three-hour period, is maintained at or above the minimum temperature established from the most recent performance test.

As of the issuance of this Title V operating permit, the capture efficiency value is **98%** based on **December 19 – 20, 2006** testing and the destruction efficiency is **99.4%** based on July 24, 2001 performance testing. These values set an overall VOC destruction efficiency value of **97.4%** from this source. As long as the oxidizer temperature is at or above **1,450 °F** during all three hour periods of operation, the overall destruction efficiency of **97.4%** shall be utilized in the calculation of VOC emissions.

This minimum oxidizer temperature value accounts for the allowance of **50° F** below the (compliant) measured average test temperature (**1,500 ° F**) as specified at 1200-03-18-.03(5)(b)(9) of the TAPCR. The above capture and destruction efficiencies and minimum *average* three-hour thermal oxidizer temperature requirement may be revised upon receipt and acceptance by the Technical Secretary of more recent test data which indicates compliance with the applicable regulations. **Note that the minimum temperature requirements for the MACT requirements do not make allowance for 3-hour average temperatures below the temperature measured during the compliant test (i.e. 1,500 ° F currently).**

2. VOC emitted is (100% – the control efficiency in Item 1) multiplied by the uncontrolled VOC emissions.

3. VOC Emitted in ton/month is calculated by dividing VOC emitted in lb/month by 2000 lb/ton.
4. The Tons per 12 month value is the sum of the VOC emissions in the 11 months preceding the month just completed + the VOC emissions in the month just completed.

DRAFT

Calculation of VOC Emissions for Fee Purposes

The VOC emissions from the two ESD Spray Booths associated with this process shall be calculated for fee purposes from the above MONTHLY VOC EMISSION LOG. The VOC emissions calculated from the above table for each July 1 through the following June 30 shall be used for the determination of emissions for fee purposes.

- E8-4.** This source shall not discharge VOC air emissions from coatings in excess of the calculated monthly emission rate provided in the following:

$$\begin{aligned} \text{Total VOC Allowable from Coatings (lb/mo)} = & S_{HPA} \times 39 \text{ lb VOC/gal solids} + S_C \times 10 \text{ lb VOC/gal} \\ & \text{solids} + S_{AD\&E} \times 6.7 \text{ lb VOC/gal solids} + S_{AO} \times 5.1 \text{ lb} \\ & \text{VOC/gal solids} \end{aligned}$$

Where,

- S_{HPA} = Volume of high performance architectural coating solids sprayed in gallons per month
- S_C = Volume of clear coating solids sprayed in gallons per month
- $S_{AD\&E}$ = Volume of air dried and extreme coating solids sprayed in gallons per month
- S_{AO} = Volume of all other coating solids sprayed in gallons per month

TAPCR 1200-03-18-82 – Averaged solid equivalency for 1200-03-18-.20

Compliance Method: Compliance with this condition is assured by calculating the allowable VOC emissions and the monthly VOC emissions from the emission factors and control efficiency of the thermal oxidizer established during performance testing.

MONTHLY LOGS FOR SOURCE 80-0009-06**MONTH/YEAR:****COATING CLASSIFICATION¹ LOG: (e.g. High Performance Architectural Coating, Extreme Performance Coating, etc.)**

Coating Identification	Paint Applied (gal/mo)	Paint VOC Content ²	VOC Applied from the Paint (lb/mo)	Solvent Applied (gal/mo)	Solvent VOC Content	VOC Applied from the Solvent (lb/mo)	Uncontrolled VOC Emissions (lb/mo)	Thermal Oxidizer Overall Emission Reduction Efficiency ³	VOC Emitted (lb/mo)	Solids Content ⁴ (gal/gal)	Volume of Solids Used (gal/mo)
Paint Job 1	A	B	$C = A \times B$	D	E	$F = D \times E$	$G = C + F$	H	$I = (100\% - H) \times G$	J	$K = A \times J$
Paint Job 2, ...,											
Paint Job n											
Total									Total I = Sum ($I_1 \dots I_n$)		Total K = Sum ($K_1 \dots K_n$)

Paint jobs in a given month are enumerated 1 through n

- One table (or log) shall be prepared for each coating classification used as identified in 1200-03-18-.20(3).
- VOC content, as supplied, is obtained from the log maintained by Condition E8-5.
- The oxidizer overall emission reduction efficiency shall be calculated from capture and destruction efficiency values obtained during the most recent performance test approved by the Division. If the oxidizer is not used during spray painting, the control efficiency shall be zero. If no record of the temperature is available, the control efficiency shall be zero for that time period of missing temperatures. The overall destruction efficiency shall be utilized in the VOC emissions calculation only when the minimum thermal oxidizer temperature, averaged over each three-hour period, is maintained at or above the minimum temperature established from the most recent performance test.

As of the issuance of this Title V operating permit, the capture efficiency value is **98%** based on **December 19 – 20, 2006** testing and the destruction efficiency is **99.4%** based on July 24, 2001 performance testing. These values set an overall VOC destruction efficiency value of **97.4%** from this source. As long as the oxidizer temperature is at or above **1,450 °F** during all three hour periods of operation, the overall destruction efficiency of **97.4%** shall be utilized in the calculation of VOC emissions.

This minimum oxidizer temperature value accounts for the allowance of **50° F** below the (compliant) measured average test temperature (**1,500 ° F**) as specified at 1200-03-18-.03(5)(b)(9) of the TAPCR. The above capture and destruction efficiencies and minimum *average* three-hour thermal oxidizer temperature requirement may be revised upon receipt and acceptance by the Technical Secretary of more recent

test data which indicates compliance with the applicable regulations. **Note that the minimum temperature requirements for the MACT requirements do not make allowance for 3-hour average temperatures below the temperature measured during the compliant test (i.e. 1,500 ° F currently).**

4. Solids content is calculated or obtained (in terms of gallon solids per gallon paint, as supplied) from the log maintained in Condition E8-5.

DRAFT

CALCULATED MONTHLY ALLOWABLE LIMIT FROM COATINGS FOR SOURCE 80-0009-06

MONTH/YEAR:

PAINT CLASSIFICATION	VOC STANDARD ¹ (lb VOC/gal)	VOC STANDARD ² (lb VOC/gal Solids)	VOLUME OF SOLIDS USED ³ (gal Solids/month)	ALLOWABLE VOC EMISSION RATE ⁴ (lb/month)
High Performance Architectural Coating	6.2	39		
Clear Coating	4.3	10		
Air Dried & Extreme Performance Coating	3.5	6.7		
All Other Coatings	3.0	5.1		
Total VOC Allowable from Coatings				

1. These standards are provided in 1200-03-18-.20(3) and are stated on an as-applied basis.
2. These standards are calculated in accordance with 1200-03-18-.82(3) and are expressed in terms of gallons of solids used or dispensed (Solids equivalency method).
3. Volume of solids used is transcribed from the logs collected in accordance with the previous log
4. Allowable VOC Emission Rate from each paint class (lb/mo) = VOC Standard (lb VOC/ gal solids) x Volume of Solids Used (gal solids/mo).

Total VOC Allowable from Coatings (lb/mo) = Sum of Allowable VOC Emission Rate from [High Performance Architectural Coating (lb/mo) + Clear Coating (lb/mo) + Air Dried & Extreme Coating (lb/mo) + All Other Coatings (lb/mo)]. Total VOC

Allowable limit (from coatings) excludes emissions from cleanup and other non-coating materials. Total VOC Allowable from Coatings shall not exceed the VOC limit for this source referenced in **Condition E8-3**.

E8-5. The VOC content and solids content of solvent-based coatings* with a VOC emission standard included in Chapter 1200-03-18 of the Tennessee Air Pollution Control Regulations shall be determined once by using the procedures and analyses of EPA Method 24 or equivalent method as stipulated in 1200-03-18-.81 of the Regulations. This determination can be made for the coating as supplied by the paint vendor. This information may be obtained by laboratory analyses or from manufacturer or vendor certification stating the VOC and solids content was determined by EPA Method 24 or equivalent method.

The VOC and solids contents of water-based coatings** and thinners shall be determined by MSD sheets or from manufacturer or vendor formulation data which explicitly list VOC content by weight and solids content by volume.

The VOC and solids contents of any new coating shall be determined as stated above. The results of all of these determinations for both existing and new coatings for the emission source of concern shall also be compiled in a tabular or spreadsheet format and maintained at the source location. This information shall be retained for a period of at least 5 years and shall be made available for inspection by the Technical Secretary or a Division representative.

* A solvent-based coating is one which contains 5 percent or less water by weight in its volatile fraction.

** A water-based coating is one which contains more than 5 percent water by weight in its volatile fraction.

TAPCR 1200-03-18-.81

E8-6. The permittee shall keep a maintenance log for the capture system, control device, and monitoring equipment including all routine and non-routine maintenance performed. Also, a log of the dates and duration of any outages shall be maintained.

TAPCR 1200-03-18-.03(5)(b)

E8-7. Purchase orders or invoices for all VOC and HAP containing materials or records thereof associated with the permitted processes shall be maintained and kept available for inspection by the Technical Secretary or a Division representative. These orders or invoices shall be retained for not less than five years.

80-0009-13: Two Natural Gas-Fired Homogenizing Ovens 1 & 2 (**14.3** million Btu/hr and **13.5** million Btu/hr, respectively), Exhaust Inside Building.

E9. Homogenizing Ovens 1 & 2

E9-1. Particulate matter emitted from this source shall not exceed **4.0** pounds per hour.

TAPCR 1200-03-07-.02, Table 1

Compliance Method: Compliance with this requirement is based on the EPA AP-42 emission factor of 1.9 lb/10⁶ ft³ for natural gas combustion. (Table 1.4-2, 7/98 Revision)

E9-2. Sulfur dioxide emitted from this source shall not exceed **5.0** tons per year. This emission limitation is established pursuant to Rule 1200-03-26-.02(6)(b) of the Tennessee Air Pollution Control Regulations and the information contained in the mutual agreement letter dated August 5, 1997.

Compliance Method: Compliance with this requirement is based on EPA AP-42 emission factor of 0.6 lb/10⁶ ft³ for natural gas combustion (Table 1.4-2, 7/98 Revision).

80-0009-14: One Diesel-Fired Internal Combustion Emergency Generator (50 kW), 67.05 Hp Compression Ignition. Installation Date: March 23, 2000. This information was included in the October 8, 2013 Minor Permit Modification Application. This source is subject to Subpart ZZZZ.

E10. Diesel-Fired Internal Combustion Emergency Generator

E10-1. This source consists of one diesel-fired emergency generator Olympian D50P1, Perkins Diesel Engine. The rated design power for the compression ignition engine is 67.05 Hp (50 kW).

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and application dated October 8, 2013

Compliance Method: This condition is a statement of design power for this source. If the permittee wishes to increase the design rate or modify this source, the permittee shall pursue the appropriate Title V procedures in accordance with 1200-03-09-.02(11) of TAPCR. If a construction permit is applied for, this shall be done in accordance with 1200-03-09-.01(1) of TAPCR.

E10-2. Only diesel fuel shall be used as fuel for this source.

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and application dated October 8, 2013

Compliance Method: Compliance with this limitation shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2(b)** of Title V Operating Permit Number 578587.

E10-3. The permittee has designated this source as an Emergency Power Generator. According to a memorandum dated September 6, 1995, from John Seitz, Director, Office of Air Quality Planning and Standards, "EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions." This value will be assumed to be the maximum operating hours per calendar year for this source for the purpose of establishing a "potential to emit" for the facility for the pollutants of concern for the engine specified in **Condition E10-1**. In the event the unit operates beyond this time limit, the total annual hours of operation shall be reported to the Technical Secretary by the end of the calendar year, along with the amount of fuel used, and actual emissions from this unit.

Compliance Method: The permittee shall maintain records of operating time for the emergency generator on a monthly basis at this source in the following format or another format providing the same information. The permittee shall retain these records at the source location for a period not less than five years and keep them available for inspection by the Technical Secretary or a Division representative. All data must be entered in the log no later than 30 days from the end of the month for which the data is required.

Operating Time for the Emergency Generator

Year

Month, Year	Emergency Operation (hr/month)	Emergency Operation (hr /calendar year)	Non- Emergency Operation (hr/month)	Non- Emergency Operation (hr /calendar year)	Maintenance & Readiness Testing plus Non- Emergency Operation (hr/month)	Maintenance & Readiness Testing plus Non- Emergency Operation (hr /calendar year)

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and application dated October 8, 2013

E10-4. Particulate matter (TSP) emitted from this compression-ignition engine shall not exceed 0.6 lb/MMBtu (0.34 lb/hr).

TAPCR 1200-03-06-.02(2)

Compliance Method: Compliance is assured based on the use of diesel fuel only and EPA AP-42 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines dated October 1996.

E10-5. Carbon monoxide (CO) emitted from this compression-ignition engine shall not exceed 0.5 b/hr.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance is assured based on the use of diesel fuel only and EPA AP-42 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines dated October 1996.

E10-6. Sulfur dioxide (SO₂) emitted from this compression-ignition engine shall not exceed 0.5 b/hr.

TAPCR 1200-03-14-.03(5) - BACT

Compliance Method: Compliance is assured based on the use of diesel fuel only and EPA AP-42 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines dated October 1996.

E10-7. Nitrogen oxide (NO_x) emitted from this compression-ignition engine shall not exceed 3.0 lb/hr.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance is assured based on the use of diesel fuel only and EPA AP-42 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines dated October 1996.

E10-8. The emergency engine may be removed and replaced with repaired or refurbished equivalent capacity emergency engine in order to maintain facility operation.

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and application dated October 8, 2013

Compliance Method: Records shall be maintained on site of such changes and shall be entered into a log no later than a week after the unit is replaced in accordance with **Condition E2(d)-3** of Title V Operating Permit Number 578587. If the replacement engine is retained on a permanent basis, the permittee shall notify the Division in writing and submit an application to the Division if the unit is subject to any applicable Federal requirements including MACT, NSPS, etc.

E10-9. This engine (as specified at **Condition E10-1**) is subject to the provisions of 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: Stationary and Reciprocating Internal Combustion Engines (RICE).

TAPCR 1200-03-09-.03(8) and 40 CFR §§ 63.6595, 63.6603, and 63.6640

Compliance Method: This compression ignition emergency engine shall comply with the provisions of 40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). These provisions include, but are not limited to, the items specified in the table 2c below.

The compliance date with provisions of 40 CFR 63 Subpart ZZZZ was **May 3, 2013**.

Table 2c to Subpart ZZZZ of Part 63, Requirements for Existing Stationary RICE Located at Major Sources of HAP Emissions:

Source I.D.	You must meet the following requirement, except during periods of startup .	During periods of startup The permittee must . . .
Diesel-Fired Internal Combustion Generator 50 kW (67.05 Hp) Compression Ignition ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ²	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	

¹If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2c of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

²The permittee has the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

³Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

Pursuant to §63.6625(e) the permittee must operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. See Table 6 of §63.6640(a)

Pursuant to §63.6625(f) the permittee must install a non-resettable hour meter if one is not already installed.

Pursuant to §63.6625(i) for a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart, the permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil

has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements.

As stated in §63.6640, the permittee must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE \leq 500 HP located at a major source of HAP.	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Pursuant to §63.6605(a) the permittee must be in compliance with the operating limitations in Subpart ZZZZ that apply at all times.

Pursuant to §63.6605(b) at all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Pursuant to §63.6640 there is no time limit on the use of the engine in emergency situations. This emergency engines may operate for the purpose of maintenance checks and readiness testing, provided the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance and readiness testing of such units are limited to 100

hour per year. The engine may be operated up to 50 hours in non-emergency situations, but those 50 hours are counted toward the 100 hours provided for maintenance and testing.

Pursuant to §63.6640 (a) the permittee must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Table 2c according to methods specified in Table 6 to this subpart.

Pursuant to §63.6640 (b) the permittee must report each instance in which the permittee did not meet each emission limitation or operating limitation in Table 2c. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650.

Pursuant to §63.6640 (e) the permittee must also report each instance in which the permittee did not meet the requirements in Table 8 to this subpart.

Pursuant to §63.6640 (f) the permittee must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (2) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
 - (i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
 - (ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Pursuant to §63.6655 (d) the permittee must keep the records required in Table 6 of this subpart to show continuous compliance with this subpart.

Pursuant to §63.6655 (e) the permittee must keep records of the maintenance conducted on the existing stationary emergency generator RICE in order to demonstrate that it was operated and maintained according to the maintenance plan.

Pursuant to §63.6655 (f) the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii), the permittee must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

Pursuant to §63.6660 (a) the permittee's records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

Pursuant to §63.6660 (b) as specified in §63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

Pursuant to §63.6660 (c) the permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

Pursuant to §63.6665 Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to the permittee.

80-0009-15: Eleven Small Boilers and Process Heaters. See **Condition E11-1** for detailed list of units at this source. This source is subject to 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. This source is considered a fuel burning installation

E11. Small Boilers and Process Heaters

E11-1. This permit is valid for the following listed boilers and process heaters in **Table A** with the respective design heat input rates.

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and applications dated August 19, 2014, February 11, 2015, Minor Modification Application Dated January 12, 2016 (for replacing Anodizing Boiler 3 (ANOD-3)

with the same capacity, size boiler), Minor Modification Application dated April 23, 2020, and the letter dated January 8, 2020, and the Minor Modification application dated September 9, 2021 (for replacing Anodizing Boiler 3 (ANOD-3) with a new low NOx boiler with the same capacity.

Compliance Method: This condition is a statement of design heat input rates for the sources listed in **Table A**. If the permittee wishes to increase the design rates or modify these sources, the permittee shall pursue the appropriate Title V procedures in accordance with 1200-03-09-.02(11) of TAPCR. If a construction permit is applied for, this shall be done in accordance with 1200-03-09-.01(1) of TAPCR.

Source 80-0009-15 - Table A

Description	Status- new or existing	Heat Input per Unit	Fuel Type
Anodizing Boiler 1 (ANOD-1)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Anodizing Boiler 2 (ANOD-2)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Anodizing Boiler 3 (ANOD-3)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Die Burnout Tank Boiler (DBO Boiler)	Existing	1.35 mmbtu/hr	Natural Gas, Propane as Backup
Propane Vaporizer (PVAP)	Existing	3.5 mmbtu/hr	Natural Gas, Propane as Backup
Die Burnout Tanks Heaters 1 (DBO Heater 1)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Die Burnout Tanks Heaters 2 (DBO Heater 2)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Paint Line #1 Heater (PL#1 Heater)	Existing	5.0 mmbtu/hr	Natural Gas, Propane as Backup
Paint Line #3 Heater (PL#3 Heater)	Existing	2.5 mmbtu/hr	Natural Gas, Propane as Backup
Heat Cure Tank Heater 1 (Cure-1)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup
Heat Cure Tank Heater 2 (Cure-2)	Existing	2.0 mmbtu/hr	Natural Gas, Propane as Backup

Total Heat Input Rate		26.35 mmbtu/hr	
--------------------------	--	----------------	--

E11-2. Only natural gas and propane shall be used as fuel for these sources at this facility.

TAPCR 1200-03-09-.02(11)(d)1.(i)(V)III. and applications dated August 19, 2014, February 11, 2015, and October 4, 2016

Compliance Method: Compliance with this limitation shall be assured by annual certification. Certifications shall be submitted in accordance with **Condition E2(b)** of Title V Operating Permit Number 578587.

E11-3. Particulate matter (TSP), Carbon monoxide (CO), Nitrogen oxide (NO_x), Volatile organic compounds (VOC) and Sulfur dioxide (SO₂) emitted from sources indicated in the **Table A**, combined, shall not exceed the following Limits:

Source 80-0009-15 - Table B

Pollutant	Allowable Emissions (lb/hr)	Applicable Rule
PM	0.40 lb/mm Btu at 26.35 mm Btu/hr = (10.54 lb/hr)	TAPCR 1200-03-06-.03(2)
SO₂	0.03	TAPCR 1200-03-14-.01(3)
CO	2.16	TAPCR 1200-03-06-.03(2)
NO_x	3.64	TAPCR 1200-03-06-.03(2)
VOC	0.22	TAPCR 1200-03-06-.03(2)

Compliance Method: Compliance is assured based on the use of natural gas and propane fuel only and calculations from the emission factors provided in **Tables 1.4-1, 1.4-2, and 1.5-1** of **EPA AP-42**, 7/08 Revision.

E11-4. This source is subject to provisions of 40 CFR Part 63, Subpart DDDDD- National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters that applies to new, reconstructed, and existing affected sources as described in paragraphs (1) and (2) of this condition.

(1) The affected source of 40 CFR Part 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR §63.7575.

(2) The affected source of 40 CFR Part 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in 40 CFR §63.7575, located at a major source.

TAPCR 1200-03-09-.03(8) and **40 CFR §63.7575**

E11-5. The Permittee shall comply with all applicable provisions of 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and the applicable provisions of 40 CFR 63, Subpart A “General Provisions” as described in Subpart DDDDD for the units listed in **Table A of Condition E11-1**. This includes, but is not limited to the following requirements:

Work Practice Standard Requirements (See Attachment 7): [§ 63.7500]

- E11-6.** Boilers and process heaters fueled with gas 1 (natural gas or propane) and having a heat input capacity of less than or equal to 5 million BTU per hour must complete a tune-up every five years as specified in § 63.7540.
- E11-7.** Pursuant to §63.7500(c), limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.
- E11-8.** Boilers and process heaters constructed before June 4, 2010 (“existing”) must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 3 to Subpart DDDDD, satisfies the energy assessment requirement. Additional work practice Items 4.a to 4.h. in Table 3 must be performed as specified in § **63.7540 (See Attachment 7).**

Notification, Recordkeeping, and Reporting Requirements: [§ 63.7530] [§ 63.7545]

- E11-9.** The notifications in 40 CFR 63 Subpart A, General Provisions indicated in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply must be submitted by the dates specified (**See Attachment 8**).

TAPCR 1200-03-09-.03(8)

- E11-10.** If a new or reconstructed source starts up on or after January 31, 2013 an Initial Notification must be submitted not later than 15 days after the actual date of startup of the affected source.

TAPCR 1200-03-09-.03(8)

- E11-11.** An existing unit designed to burn gas 1 subcategory with a heat input capacity of less than 10 million BTU per hour must have a signed statement in the Notification of Compliance Status report that indicates a tune-up of the unit was conducted.

40 CFR 65.7530(d)

- E11-12**The Notification of Compliance Status shall include a signed certification that the energy assessment was completed according to Subpart DDDDD, Table 3 and that it is an accurate depiction of the facility at the time of assessment.

40 CFR 65.7530(d) and (e)

Applicability of General Provisions to Subpart DDDDD (See Attachment 8).

- E11-13.** Units subject only to a requirement to conduct an annual, biennial, or 5-year tune-up and not subject to emission limits or operating limits, are required to submit only an annual, biennial, or 5-year compliance report, as applicable, instead of a semi-annual compliance report.

(1) The first 5-year compliance report for all boilers and process heaters with heat input capacity of less than or equal to 5 million BTU per hour must cover the period beginning on the compliance date, January 31, 2016 and ending on January 31, 2021 for existing units, or on the applicable compliance or startup date and ending 5 years after the compliance date for new sources.

(2) The first compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the applicable 5-year period from January 1 to December 31 and must be postmarked or submitted no later than January 31.

E11-14. For units subject only to the requirements of a 5-year tune up, the compliance report must contain the following information:

- (1) Company and Facility name and address.
- (2) Process unit information, emissions limitations, and operating parameter limitations.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) The total operating time during the reporting period.
- (5) The date of the most recent tune-up for each unit subject to only the requirement. Include the date of the most recent burner inspection if it was not done according to the 5-year schedule and was delayed until the next scheduled or unscheduled unit shutdown

E11-15. The Permittee shall complete an initial tune-up of all boilers and process heaters, excluding any boiler or process heater constructed after June 4, 2010, no later than January 31, 2016.

§ 63.7510(e)

E11-16. Any boiler or process heater constructed or reconstructed after June 4, 2010 (“new”) shall complete an initial tune-up by following the procedures described in **Attachment 6** of the permit no later than 13 months, 25 months, or 61 months, respectively, after the initial compliance date or startup of the new or reconstructed affected source, whichever is later.

§ 63.7510(g) , § 63.7495(a)7515(d)

80-0009-16 : Acid Etch Process with Strippers No. 1 & No.2

In this process, aluminum is dipped first into a tank to etch the extrusion surface and is then dipped into a rinse tank to halt the etching process. In the following process stage, dissolved ammonia in rinse tank wastewater is removed in the strippers.

E12-1. The ammonia emitted from this source shall not exceed **225.0** tons per calendar year. This emission limit is based on the Title V permit renewal application dated December 15, 2015.

TAPCR 1200-03-07-.07(2) (**State-only requirement**)

Compliance Method: Compliance shall be determined from records of ammonia usage upon request by the Technical Secretary or a Division representative. Note that the Technical Secretary may require demonstration of compliance with this ammonia emissions limit.

(End of Permit 578587)

ATTACHMENT 1

**OPACITY MATRIX DECISION TREE for
VISIBLE EMISSION EVALUATION METHODS 2 and 9
dated JUNE 18, 1996 and amended September 11, 2013**

**Decision Tree PM for Opacity for
Sources Subject to Rule 1200-03-05-.01
Utilizing TVEE Method 2**

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standard in Rule 1200-03-05-.01. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PMT required.

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing Tennessee Visible Emission Evaluation Method 2. The observer must be properly certified according to the criteria specified in EPA Method 9 to conduct TVEE Method 2 evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

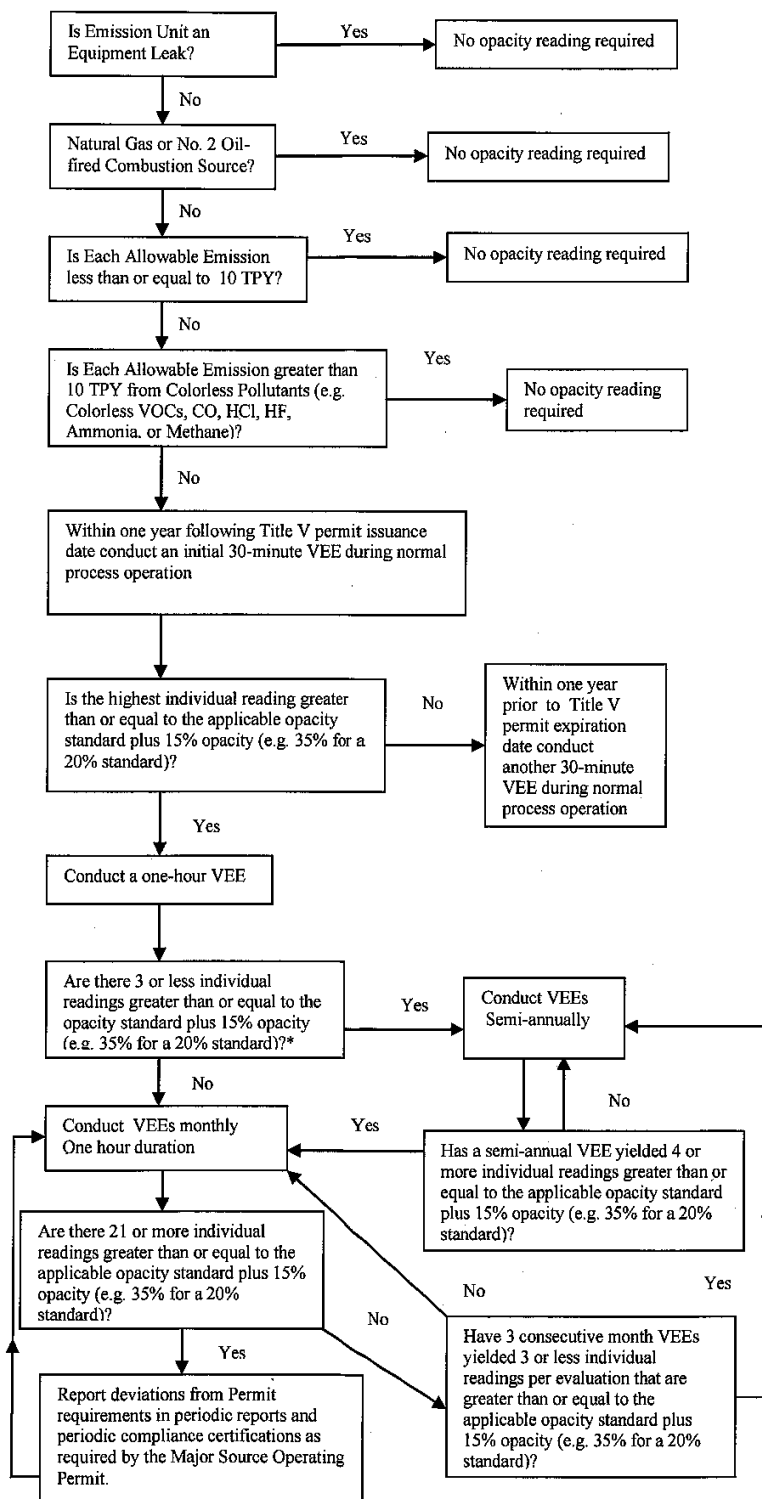
A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error
TVEE Method 2: The TAPCD declares non-compliance when 21 observations are read at the standard plus 15% opacity (e.g. 35% for a 20% standard).

*The rationale for this is the fact that Rule 1200-03-05-.01 allows for an exemption of 5 minutes (20 readings) per hour and up to 20 minutes (80 readings) per day. With 4 or more excessive individual readings per hour the possibility of a daily exceedance exists.

Note: A company could mutually agree to have all of its sources regulated by EPA Method 9. Caution: Agreement to use Method 9 could potentially place some sources in non-compliance with visible emission standards. Please be sure before you agree.

Dated June 18, 1996
Amended September 11, 2013



Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring - Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants

Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error

EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:

The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

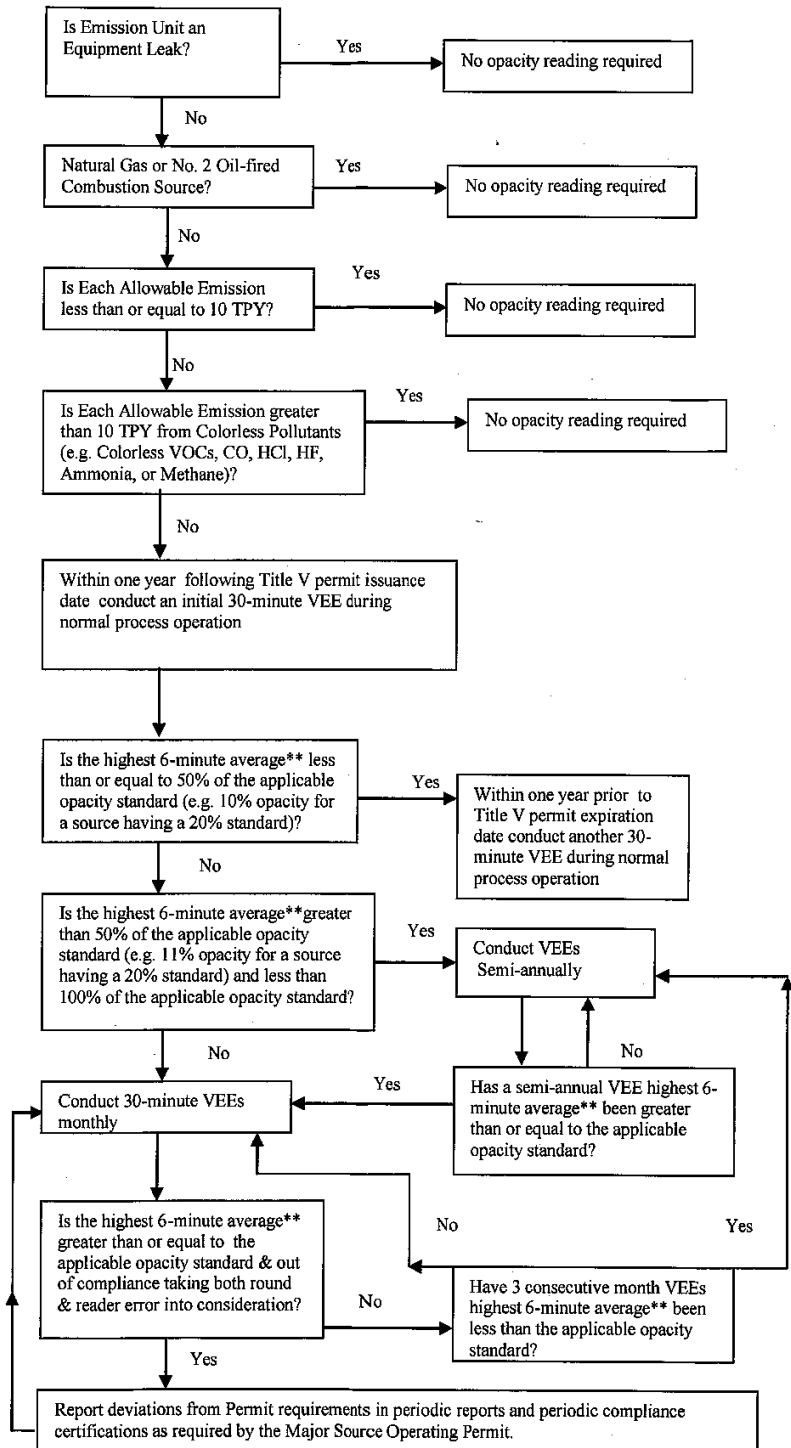
EPA Method 9, NSPS or NESHAPS stipulate opacity standards:

EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
Amended September 11, 2013



ATTACHMENT 2

40 CFR 63, Subpart M MMM

**National Emission Standards for Hazardous Air Pollutants for Surface
Coating of Miscellaneous Metal Parts**

**TABLE 3 to Subpart M MMM of Part 63-Default Organic HAP Mass
Fraction for Solvents and Solvent Blends**

and

**TABLE 4 to Subpart M MMM of Part 63-Default Organic HAP mass
Fraction for Petroleum Solvent Groups**

Table 3 to Subpart MMMM of Part 63—Default Organic HAP Mass Fraction for Solvents and Solvent Blends

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
1. Toluene	108–88–3	1.0	Toluene.
2. Xylene(s)	1330–20–7	1.0	Xylenes, ethylbenzene.
3. Hexane	110–54–3	0.5	n-hexane.
4. n-Hexane	110–54–3	1.0	n-hexane.
5. Ethylbenzene	100–41–4	1.0	Ethylbenzene.
6. Aliphatic 140		0	None.
7. Aromatic 100		0.02	1% xylene, 1% cumene.
8. Aromatic 150		0.09	Naphthalene.
9. Aromatic naphtha	64742–95–6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent	64742–94–5	0.1	Naphthalene.
11. Exempt mineral spirits	8032–32–4	0	None.
12. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.
17. Hydrotreated light distillate	64742–47–8	0.001	Toluene.
18. Stoddard solvent	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha	64742–95–6	0.05	Xylenes.
20. Varsol [®] solvent	8052–49–3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha	64742–89–8	0.06	3% toluene, 3% xylene.

22. Petroleum distillate mixture	68477-31-6	0.08	4% naphthalene, 4% biphenyl.
----------------------------------	------------	------	------------------------------

Table 4 to Subpart MMMM of Part 63—Default Organic HAP Mass Fraction for Petroleum Solvent Groups^a

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic ^b	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic ^c	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

^aUse this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.

^bMineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

^cMedium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

ATTACHMENT 3

**Appendix A to Subpart PPPP of Part 63—Determination of Weight Volatile
Matter Content and Weight Solids Content of Reactive Adhesives**

Appendix A to Subpart PPPP of Part 63—Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives

1.0 Applicability and Principle

1.1 *Applicability:* This method applies to the determination of weight volatile matter content and weight solids content for most one-part or multiple-part reactive adhesives. Reactive adhesives are composed, in large part, of monomers that react during the adhesive curing reaction, and, as a result, do not volatilize. The monomers become integral parts of the cured adhesive through chemical reaction. At least 70 weight percent of the system, excluding water and non-volatile solids such as fillers, react during the process. This method is not appropriate for cyanoacrylates. For cyanoacrylates, South Coast Air Quality Management District Test Method 316B should be used. This method is not appropriate for one-part moisture cure urethane adhesives or for silicone adhesives. For one-part moisture cure urethane adhesives and for silicone adhesives, EPA Method 24 should be used.

1.2 *Principle:* One-part and multiple-part reactive adhesives undergo a reactive conversion from liquid to solid during the application and assembly process. Reactive adhesives are applied to a single surface, but then are usually quickly covered with another mating surface to achieve a bonded assembly. The monomers employed in such systems typically react and are converted to non-volatile solids. If left uncovered, as in a Method 24 (ASTM D2369) test, the reaction is inhibited by the presence of oxygen and volatile loss of the reactive components competes more heavily with the cure reaction. If this were to happen under normal use conditions, the adhesives would not provide adequate performance. This method minimizes this undesirable deterioration of the adhesive performance.

2.0 Materials and Apparatus

2.1 Aluminum foil, aluminum sheet, non-leaching plastic film or non-leaching plastic sheet, approximately 3 inches by 3 inches. Precondition the foil, film, or sheet for 30 minutes in an oven at 110 ± 5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the foil, film, or sheet.

2.2 Flat, rigid support panels slightly larger than the foil, film, or sheet. Polypropylene with a minimum thickness of 1/8 inch is recommended for the support panels. Precondition the support panels

for 30 minutes in an oven at 110 ± 5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the support panels.

2.3 Aluminum spacers, 1/8 inch thick. Precondition the spacers for 30 minutes in an oven at 110 ± 5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the spacers.

2.4 Forced draft oven, type IIA or IIB as specified in ASTM E145–94 (Reapproved 2001), “Standard Specification for Gravity-Convection and Forced-Ventilation Ovens” (incorporated by reference, see §63.14).

2.5 Electronic balance capable of weighing to ± 0.0001 grams (0.1 mg).

2.6 Flat bottom weight (approximately 3 lbs) or clamps.

Material and Apparatus Notes

1—The foil, film, or sheet should be thick or rigid enough so that it can be easily handled in the test procedure.

3.0 Procedure

3.1 Two procedures are provided. In Procedure A the initial specimen weight is determined by weighing the foil, film, or sheet before and after the specimen is dispensed onto the foil, film, or sheet. In Procedure B the initial specimen weight is determined by weighing the adhesive cartridge (kit) before and after the specimen is dispensed.

3.2 At least four test specimens should be run for each test material. Run the test at room temperature, 74 degrees Fahrenheit (23 degrees Celsius).

Procedure A

1. Zero electronic balance.
2. Place 2 pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.
3. Record weight of aluminum foils. (A).
4. Tare balance.
5. Remove top piece of aluminum foil.
6. Dispense a 10 to 15 gram specimen of premixed adhesive onto bottom piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.
7. Record weight of sandwich (specimen and aluminum foils). (B).
8. Remove sandwich from scale, place sandwich between two support panels with aluminum spacers at the edges of the support panels to make a supported sandwich. The spacers provide a standard gap. Take care to mate the edges.
9. Place the supported sandwich on a flat surface.
10. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.
11. Allow to cure 24 hours.
12. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).
13. Bake sandwich at 110 degrees Celsius for 1 hour.
14. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature. Record post bake sandwich weight. (D).

Procedure B

1. Zero electronic balance.

2. Place two pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.
3. Record weight of aluminum foils. (A).
4. Tare balance.
5. Place one support panel on flat surface. Place first piece of aluminum foil on top of this support panel.
6. Record the weight of a pre-mixed sample of adhesive in its container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (F).
7. Dispense a 10 to 15 gram specimen of mixed adhesive onto the first piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.
8. Record weight of the adhesive container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (G).
9. Place the aluminum spacers at the edges of the bottom support panel polypropylene sheet. The spacers provide a standard gap.
10. Place the second support panel on top of the assembly to make a supported sandwich. Take care to mate the edges.
11. Place the supported sandwich on a flat surface.
12. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.
13. Allow to cure 24 hours.
14. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).
15. Bake sandwich at 110 degrees Celsius for 1 hour.
16. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature.
17. Record post-bake sandwich weight. (D).

Procedural Notes

1—The support panels may be omitted if the aluminum foil (or aluminum sheet, plastic film, or plastic sheet) will not tear and the adhesive specimen will spread to a uniform thickness within the sandwich when the flat weight is placed directly on top of the sandwich.

2—Clamps may be used instead of a flat bottom weight to spread the adhesive specimen to a uniform thickness within the sandwich.

3—When dispensing from a static mixer, purging is necessary to ensure uniform, homogeneous specimens. The weighing in Procedure B, Step 6 must be performed after any purging.

4—Follow the adhesive manufacturer's directions for mixing and for dispensing from a cartridge (kit).

4.0 Calculations

4.1 The total weight loss from curing and baking of each specimen is used to determine the weight percent volatile matter content of that specimen

Procedure A

Weight of original specimen (S) = (B)–(A)

Weight of post-bake specimen (P) = (D)–(A)

Total Weight Loss (L) = (S)–(P)

Procedure B

Weight of original specimen (S) = (F)–(G)

Weight of post-bake specimen (P) = (D)–(A)

Total Weight Loss (L) = (S)–(P)

Procedure A and Procedure B

Weight Percent Volatile Matter Content

$(V) = [(Total\ weight\ loss)/(Initial\ specimen\ weight)] \times 100 = [(L)/(S)] \times 100$

4.2 The weight volatile matter content of a material is the average of the weight volatile matter content of each specimen of that material. For example, if four specimens of a material were tested, then the weight percent volatile matter content for that material is:

$$V = [V1 + V2 + V3 + V4]/4$$

Where:

V_i = the weight percent volatile matter content of specimen i of the material.

4.3 The weight percent solids content of the material is calculated from the weight percent volatile content of the material.

$$\text{Weight Percent Solids Content (N)} = 100 - (V)$$

Calculation Notes

1—The weight loss during curing and the weight loss during baking may be calculated separately. These values may be useful for identifying sources of variation in the results obtained for different specimens of the same material.

2—For both Procedure A and Procedure B, the weight loss during curing is $(S) - [(C) - (A)]$ and the weight loss during baking is $(C) - (D)$.

ATTACHMENT 4

TABLE 1 to Subpart MMMM of Part 63 - Operating Limits

Table 1 to Subpart MMM of Part 63—Operating Limits if Using the Emission Rate With Add-On Controls Option
If you are required to comply with operating limits by §63.3892(c), you must comply with the applicable operating limits in the following table:

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.3967(a)	i. Collecting the combustion temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to §63.3967(b) (for magnet wire coating machines, temperature can be monitored before or after the catalyst bed); and either	i. Collecting the temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature before (or for magnet wire coating machines after) the catalyst bed at or above the temperature limit.
	b. Ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to §63.3967(b) (2); or	i. Collecting the temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature difference at or above the temperature difference limit.
	c. Develop and implement an inspection and maintenance plan according to §63.3967(b)(4) or for magnet wire coating machines according to section 3.0 of appendix A to this subpart	i. Maintaining and up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by §63.3967(b)(4) or for magnet wire coating machines by section 3.0 of appendix A to this subpart, you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
3. Regenerative carbon adsorber	a. The total regeneration desorbing gas (<i>e.g.</i> , steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.3967(c); and	i. Measuring the total regeneration desorbing gas (<i>e.g.</i> , steam or nitrogen) mass flow for each regeneration cycle according to §63.3968(d); and ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.
	b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.3967(c)	i. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to §63.3968(d); and ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.
4. Condenser	a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to §63.3967(d)	i. Collecting the condenser outlet (product side) gas temperature according to §63.3968(e); ii. Reducing the data to 3-hour block averages; and

		iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit.
5. Concentrators, including zeolite wheels and rotary carbon adsorbers	a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to §63.3967(e); and	i. Collecting the temperature data according to 63.3968(f); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature at or above the temperature limit.
	b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to §63.3967(e)	i. Collecting the pressure drop data according to 63.3968(f); ii. Reducing the pressure drop data to 3-hour block averages; and iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit.
6. Emission capture system that is a PTE according to §63.3965(a)	a. The direction of the air flow at all times must be into the enclosure; and either	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.3968(b)(1) or the pressure drop across the enclosure according to §63.3968(g)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
	b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minutes; or	i. See items 6.a.i and 6.a.ii.
	c. The pressure drop across the enclosure must be at least 0.007 inch H ₂ O, as established in Method 204 of appendix M to 40 CFR part 51	i. See items 6.a.i and 6.a.ii.
7. Emission capture system that is not a PTE according to §63.3965(a)	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.3967(f)	i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.3968(g); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limited.

ATTACHMENT 5

Procedures for Conducting Performance Test According to 40 CFR §§63.3964, 63.3965, 63.3966, and 63.3967 for the Emission Rate With Add-On Controls Compliance Option in Subpart MMMM

§ 63.3960 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) New and reconstructed affected sources. For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(j), you must conduct according to the schedule in paragraphs (a)(1)(i) and (ii) of this section initial and periodic performance tests of each capture system and add-on control device according to the procedures in §§ 63.3964, 63.3965, and 63.3966 and establish the operating limits required by § 63.3892. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3961(j), you must initiate the first material balance no later than the applicable compliance date specified in § 63.3883. For magnet wire coating operations, you may, with approval, conduct a performance test of one representative magnet wire coating machine for each group of identical or very similar magnet wire coating machines.

(i) You must conduct the initial performance test and establish the operating limits required by § 63.3892 no later than 180 days after the applicable compliance date specified in § 63.3883.

(ii) You must conduct periodic performance tests and establish the operating limits required by § 63.3892 within 5 years following the previous performance test. You must conduct the first periodic performance test before July 8, 2023, unless you are already required to complete periodic performance tests as a requirement of renewing your facility's operating permit under 40 CFR part 70 or 40 CFR part 71 and have conducted a performance test on or after July 8, 2018. Thereafter you must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. For any control device for which you are using the catalytic oxidizer control option at § 63.3967(b) and following the catalyst maintenance procedures in § 63.3967(b)(4), you are not required to conduct periodic testing control device performance testing as specified by this paragraph. For any control device for which instruments are used to continuously measure organic compound emissions, you are not required to conduct periodic control device performance testing as specified by this paragraph.

(2) You must develop and begin implementing the work practice plan required by § 63.3893 no later than the compliance date specified in § 63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3961. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted

according to § 63.3961(j); calculations according to § 63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3968; and documentation of whether you developed and implemented the work practice plan required by § 63.3893.

(4) For the initial compliance demonstration, you do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.3892 until after you have completed the initial performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits established based on the initial performance tests specified in paragraph (a)(1) of this section for your affected source on the date you complete the performance tests. For magnet wire coating operations, you must begin complying with the operating limits for all identical or very similar magnet wire coating machines on the date you complete the performance test of a representative magnet wire coating machine. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in § 63.3961(j).

(b) Existing affected sources. For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3883. Except for magnet wire coating operations and solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(j), you must conduct according to the schedule in paragraphs (b)(1)(i) and (ii) of this section initial and periodic performance tests of each capture system and add-on control device according to the procedures in §§ 63.3964, 63.3965, and 63.3966 and establish the operating limits required by § 63.3892. For magnet wire coating operations, you may, with approval, conduct a performance test of a single magnet wire coating machine that represents identical or very similar magnet wire coating machines. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3961(j), you must initiate the first material balance no later than the compliance date specified in § 63.3883.

(i) You must conduct the initial performance test and establish the operating limits required by § 63.3892 no later than 180 days after the applicable compliance date specified in § 63.3883.

(ii) You must conduct periodic performance tests and establish the operating limits required by § 63.3892 within 5 years following the previous performance test. You must conduct the first periodic performance test before July 8, 2020, unless you are already required to complete periodic performance tests as a requirement of renewing your facility's operating permit under 40 CFR part 70 or 40 CFR part 71 and have conducted a performance test on or after July 8, 2018. Thereafter you must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. For any control device for which you are using the catalytic oxidizer control option at § 63.3967(b) and following the catalyst maintenance procedures in §

63.3967(b)(4), you are not required to conduct periodic testing control device performance testing as specified by this paragraph. For any control device for which instruments are used to continuously measure organic compound emissions, you are not required to conduct periodic control device performance testing as specified by this paragraph.

(2) You must develop and begin implementing the work practice plan required by § 63.3893 no later than the compliance date specified in § 63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3961. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to § 63.3961(j); calculations according to § 63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3968; and documentation of whether you developed and implemented the work practice plan required by § 63.3893.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section. You are still required to conduct a periodic performance test according to the applicable requirements of paragraphs (a)(1)(ii) and (b)(2)(ii) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

§ 63.3964 What are the general requirements for performance tests?

(a) Before January 5, 2021, you must conduct each performance test required by §63.3960 according to the requirements in §63.7(e)(1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in §63.7(h). On and after January 5, 2021, you must

conduct each performance test required by §63.3960 according to the requirements in this section unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or periods of nonoperation do not constitute representative conditions for purposes of conducting a performance test. The owner or operator may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests

(2) *Representative emission capture system and add-on control device operating conditions.* You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in § 63.3965. You must conduct each performance test of an add-on control device according to the requirements in § 63.3966.

§ 63.3965 How do I determine the emission capture system efficiency?

You must use the procedures and test methods in this section to determine capture efficiency as part of each performance test required by § 63.3960.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings, thinners and/or other additives, and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off, curing, and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of the production, which includes surface preparation activities and drying and curing time.

(c) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary

total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term VOC in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings, thinners and/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

$$TVH_{used} = \sum_{i=1}^n (TVH_i)(Vol_i)(D_i) \quad (Eq. 1)$$

Where:

TVH_{used}= Mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

TVH_i= Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

Vol_i= Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

D_i= Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system. They are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section:

$$CE = \frac{(TVH_{used} - TVH_{uncaptured})}{TVH_{used}} \times 100 \quad (\text{Eq. 2})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{used}= Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

TVH_{uncaptured}= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for the Method 204B or 204C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture

efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section:

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{captured}= Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

TVH_{uncaptured}= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

§ 63.3966 How do I determine the add-on control device emission destruction or removal efficiency?

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3960. For each performance test, you must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight.

(4) Use Method 4 of appendix A to 40 CFR part 60, to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either EPA Method 25 or 25A of appendix A-7 to 40 CFR part 60.

(1) Use EPA Method 25 of appendix A-7 to 40 CFR part 60 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use EPA Method 25A of appendix A-7 to 40 CFR part 60 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use EPA Method 25A of appendix A-7 to 40 CFR part 60 if the add-on control device is not an oxidizer.

(4) You may use EPA Method 18 of appendix A-6 to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions:

$$M_f = Q_{sd} C_c (12) (0.0416) (10^{-6}) \quad (Eq. 1)$$

Where:

M_f = Total gaseous organic emissions mass flow rate, kg per hour (h).

C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis.

Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \quad (\text{Eq. 2})$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

§ 63.3967 How do I establish the emission capture system and add-on control device operating limits during the performance test?

During the performance test required by §63.3960 and described in §§63.3964, 63.3965, and 63.3966, you must establish the operating limits required by §63.3892 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3892.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(1) During performance tests, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) For each performance test, use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference

across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) You must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. For each performance test, use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to §63.3966. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers*. If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (*e.g.*, steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers*. If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators*. If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the minimum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems*. For each capture device that is not part of a PTE that meets the criteria of §63.3965(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) During the capture efficiency determination required by §63.3960 and described in §§63.3964 and 63.3965, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

ATTACHMENT 6

Continuous Parameter Monitoring System (CPMS) Installation, Operation and Maintenance requirements to 40 CFR §§ 63.3968 for the Emission Rate With Add-On Controls Compliance Option in Subpart MMMM

Thermal oxidizers and catalytic oxidizers. If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements below:

- (1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.
- (2) For a catalytic oxidizer, install gas temperature monitors upstream and/or downstream of the catalyst bed as required in §63.3967(b) of Attachment 5.
- (3) For all thermal oxidizers and catalytic oxidizers, you must meet the following requirements for each gas temperature monitoring device.
 - (i) Locate the temperature sensor in a position that provides a representative temperature.
 - (ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.
 - (iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.
 - (iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.
 - (v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

Condensers. If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with the requirements below.

- (1) The temperature monitor must provide a gas temperature record at least once every 15 minutes.
- (2) For all condensers, you must meet the following requirements for each temperature monitoring device.
 - (i) Locate the temperature sensor in a position that provides a representative temperature.
 - (ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.
 - (iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

- (iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.
- (v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

Concentrators. If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the following requirements.

- (1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the following requirements for each gas temperature monitoring device.
 - (i) Locate the temperature sensor in a position that provides a representative temperature.
 - (ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.
 - (iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.
 - (iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.
 - (v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.
- (2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must comply with the following requirements.
 - (i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.
 - (ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.
 - (iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.
 - (iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.
 - (v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure

measurement devices or to pressure simulation using calibrated pressure sources.

- (vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.
- (vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

Emission capture systems. The capture system monitoring system must comply with the following applicable requirements.

- (1) For each flow measurement device, you must meet the following requirements.
 - (i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.
 - (ii) Use a flow sensor with an accuracy of at least 10 percent of the flow.
 - (iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.
 - (iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.
 - (v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.
 - (vi) Perform leak checks monthly.
 - (vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.
- (2) For each pressure drop measurement device, you must comply with the following requirements.
 - (i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.
 - (ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.
 - (iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.
 - (iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.
 - (v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

- (vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.
- (vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

Compliance Method: The permittee must operate the CPMS for thermal and catalytic oxidizers, condensers, concentrators and emission capture systems as specified below.

- (1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.
- (2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.
- (3) You must record the results of each inspection, calibration, and validation check of the CPMS.
- (4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.
- (5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).
- (6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.
- (7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

Capture system bypass line. You must meet the following requirements for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

- (1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified below.

- (i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.
 - (ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.
 - (iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.
 - (iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.
 - (v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow direction indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.
- (2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance report required by **Conditions E4-2 and E4-3**.

Regenerative carbon adsorbers. If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with the following requirements.

- (1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.
- (2) The carbon bed temperature monitor must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.
- (3) For all regenerative carbon adsorbers, you must meet the following requirements for each temperature monitoring device.
 - (i) Locate the temperature sensor in a position that provides a representative temperature.
 - (ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.
 - (iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.
 - (iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.
 - (v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

Compliance Method: The permittee must operate the CPMS for capture system bypass lines and regenerative carbon adsorbers as specified below.

- (1) You must record the results of each inspection, calibration, and validation check of the CPMS.
- (2) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.
- (3) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).
- (4) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.
- (5) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the

monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

40 CFR §63.3968

ATTACHMENT 7

40 CFR 63 Subpart DDDDD

**National Emission Standards for Hazardous Air Pollutants for Major
Sources: Industrial, Commercial, and Institutional Boilers and Process
Heaters**

Table 3 to Subpart DDDDD of Part 63 — Work Practice Standards

Table 3 to Subpart DDDDD of Part 63 — Work Practice Standards

As stated in §63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in §63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in §63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in §63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items

	a. to e. appropriate for the on-site technical hours listed in §63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup	You must operate all CMS during startup. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, and liquefied petroleum gas.
	If you start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed

	combustion (FBC) boilers, dry scrubber, fabric filter, selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose.
	You must comply with all applicable emission limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown	You must operate all CMS during shutdown. While firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

[78 FR 7198, Jan. 31, 2013]

ATTACHMENT 8

40 CFR 63 Subpart DDDDD

**National Emission Standards for Hazardous Air Pollutants for Major
Sources: Industrial, Commercial, and Institutional Boilers and Process
Heaters**

**Table 10 to Subpart DDDDD of Part 63 — Applicability of General
Provisions to Subpart DDDDD**

Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

As stated in §63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§63.1	Applicability	Yes.
§63.2	Definitions	Yes. Additional terms defined in §63.7575
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities and Circumvention	Yes.
§63.5	Preconstruction Review and Notification Requirements	Yes.
§63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§63.6(e)(1)(i)	General duty to minimize emissions.	No. See §63.7500(a)(3) for the general duty requirement.
§63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§63.6(g)	Use of alternative standards	Yes.

§63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See §63.7500(a).
§63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	Yes.
§63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§63.6(j)	Presidential exemption.	Yes.
§63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at §63.7520(a) to (c).
§63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.
§63.8(c)(1)	Operation and maintenance of CMS	Yes.
§63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See §63.7500(a)(3).
§63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.

§63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§63.8(e)	Performance evaluation of a CMS	Yes.
§63.8(f)	Use of an alternative monitoring method.	Yes.
§63.8(g)	Reduction of monitoring data	Yes.
§63.9	Notification Requirements	Yes.
§63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(b)(2)(iii)	Maintenance records	Yes.
§63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.

§63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.
§63.10(d)(1) and (2)	General reporting requirements	Yes.
§63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See §63.7550(c)(11) for malfunction reporting requirements.
§63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§63.11	Control Device Requirements	No.
§63.12	State Authority and Delegation	Yes.
§63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

ATTACHMENT 9

TITLE V FEE SELECTION FORM:
FORM APC 36



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor, Nashville, TN 37243
Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

APC 36

TITLE V FEE SELECTION

Type or print and submit to the email address above.			
FACILITY INFORMATION			
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)]			
2. Site name (if different from legal name)			
3. Site address (St./Rd./Hwy.)			County name
City			Zip code
4. Emission source reference number		5. Title V permit number	
FEE SELECTION			
This fee selection is effective beginning January 1, _____. When approved, this selection will be effective until a new Fee Selection form is submitted. Fee Selection forms must be submitted on or before December 31 of the annual accounting period.			
6. Payment Schedule (choose one):			
Calendar Year Basis (January 1 – December 31) <input type="checkbox"/>		Fiscal Year Basis (July 1 – June 30) <input type="checkbox"/>	
7. Payment Basis (choose one):			
Actual Emissions Basis <input type="checkbox"/>		Allowable Emissions Basis <input type="checkbox"/>	Combination of Actual and Allowable Emissions Basis <input type="checkbox"/>
8. If Payment Basis is "Actual Emissions" or "Combination of Actual and Allowable Emissions", complete the following table for each permitted source and each pollutant for which fees are due for that source. See instructions for further details.			
Source ID	Pollutant	Allowable or Actual Emissions	If allowable emissions: Specify condition number and limit. If actual emissions: Describe calculation method and provide example. Provide condition number that specifies method, if applicable.

8. (Continued)

[illegible]

TITLE V PERMIT STATEMENT OF BASIS

Facility Name:	Bonnell Aluminum, Inc.
City:	Carthage
County:	Smith

Date of (3rd renewal) Application:	September 29, 2020
Emission Source Reference No.:	80-0009
Permit renewal No.:	578578

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to **Bonnell Aluminum, Inc.** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It describes the facility receiving the permit, the applicable air permitting requirements and their significance, and the compliance status of the facility with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD - Prevention of Significant Deterioration

NESHAP - National Emission Standards for Hazardous Air Pollutants

NSPS - New Source Performance Standards

MACT - Maximum Achievable Control Technology

NSR - New Source Review

I. Identification Information

A. Source Description

The following sources are listed in the Title V (3rd renewal) permit :

Aluminum Melting and Casting Operation

80-0009-03: Casting Furnace 02

80-0009-10: Casting Furnace 04

10) are combined in the Title V permit. However, they are actually two separate “process emission sources” as this term is defined at 1200-03-02-.01(qq). This source is subject to the provisions of 40 CFR Part 63, **Subpart RRR** “National Emission Standards for Hazardous Air Pollutants from Secondary Aluminum Production” and Subpart A “General Provisions”.

This source is subject to provisions of 40 CFR Part 63, **Subpart M** – “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products” and Subpart A “General Provisions” as specified in Table 2 of 40 CFR Part 63, Subpart M.

80-0009-06: Metal Parts Coating Line. Four ESD Spray Booths with Exhaust Filters and Thermal Oxidizer Control

This source is subject to provisions of 40 CFR Part 63, **Subpart M** – “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products” and Subpart A “General Provisions” as specified in Table 2 of 40 CFR Part 63, Subpart M.

To assure compliance, this facility must maintain a minimum *average* thermal oxidizer temperature, over all three-hour periods, of **1,450° F**. This is also based upon the capture system at this process meeting the requirements of a “Permanent Total Enclosure” with 100% capture efficiency and 99.4% Destruction Efficiency.

80-0009-13: Natural Gas Fired Homogenizing Ovens 1 & 2 (14.3 million Btu/hr and 13.5 million Btu/hr, respectively), Exhausts Inside Building.

Compliance with the requirement of this source is based on the EPA AP-42 emission factors for natural gas combustion. (Table 1.4-2, 7/98 Revision).

This facility is major for PSD purposes and the threshold for PM is 25 tons per year and for PM₁₀ is 15 tons per year.

EPA AP-42:

PM Emissions:

19.85 mmbtu/hr = 0.0198 mmcfh

0.0198 mmcfh x 7.6 lb total PM/mmcfh (AP-42 1.4-2) = 0.15 lb/hr and 0.66 tons PM and/or PM₁₀ per year

Therefore, the potential PM / PM₁₀ is well below the threshold, even though the allowable PM would be higher than the significant level.

NO_x Emissions:

NO_x, (0.0198 mmcfh x 100 = 1.98 lbNO_x/hr = 8.7 tons/yr, well below 40 ton threshold)

B. Facility Classification

1. Attainment or Non-Attainment Area Location

Area is designated as an attainment area for all criteria pollutants.

2. Company is located in a Class II area (this means that the facility is not located within a national park or national wilderness area; see 40 CFR 52.21(e) for complete definition).

C. Regulatory Status

PSD/NSR

1. This facility is a major source for PSD purposes, due to the designation as a “Secondary Metal Production” facility (SIC 33), and the magnitude of several pollutants of greater than 100 tons per year (VOC and NO_x). This facility is also a major source for Greenhouse Gas emissions.
2. Title V Major Source Status by Pollutant are listed below:

Pollutant	Is the pollutant emitted?	If emitted, what is the facility’s status?	
		Major Source Status	Non-Major Source Status
PM	Yes		X
PM₁₀	Yes	N/A	N/A
SO₂	Yes		X
VOC	Yes	X	
NO_x	Yes		X
CO	Yes		X
Individual HAP	Yes	X	
Total HAPs	Yes	X	
Greenhouse Gases (GHG)	Yes	X	

3. MACT Standards

This facility is a major source for HAPs and subject to **40 CFR Part 63 Subpart MMMM**, Coating of Miscellaneous Metal Parts and Products.

This facility is subject to the provisions **40 CFR Part 63, Subpart RRR** “National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production”.

This facility is subject to the provisions of **40 CFR 63 Subpart ZZZZ**, National Emission Standards for Hazardous Air Pollutants: Stationary and Reciprocating Internal Combustion Engines (RICE).

This facility also is subject to the provisions **40 CFR Part 63, Subpart DDDDD** “National Emission Standards for Hazardous Air Pollutants from Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Sources.

“Compliance Assurance Monitoring” 40 CFR § 64.2 “Applicability” states that “The requirements of this part shall not apply to any of the following emission limitations or standards: Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 ... of the Act.” Because this source (80-0009-06 Metal Parts Coating Line) is subject to MACT (section 111 Hazardous

Air Pollutants), the “Compliance Assurance Monitoring” Requirements found at 40 CFR § 64.2 will not apply here.

4. Program Applicability

Are the following programs applicable to the facility?

PSD **Yes**

NESHAP **Yes**

NSPS **No**

II. Compliance Information

Compliance Status

Is the facility currently in compliance with all applicable requirements? **Yes**

Are there any applicable requirements that will become effective during the permit term? **No**

III. Other Requirements

A. Emissions Trading

The facility is not involved in an emission trading program.

B. Acid Rain Requirements

This facility is not subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

This facility is not subject to provisions of 1200-3-32 (Prevention of Accidental Releases). Previously this permit was not subject to 112(r), but this condition has since been added to the permit as a standard Title V condition.

IV. General Information

A. Potential emissions of criteria air pollutants are listed below:

Facility-wide Potential Emissions

REGULATED POLLUTANTS	POTENTIAL EMISSIONS TONS PER 12-MONTH BASIS
PARTICULATE MATTER (PM)	208.90
SO₂	5.25
VOC	184.96
NO_x	16.69
CO	9.58
HCl	26.0
GHG	129,160

* based on PM MACT limit of 0.40 lb/ton. This limit overrides PM limit based on Table 2.

V. Public Participation Procedures

A. Notification of this draft permit was mailed to the following environmental agencies:

- Nashville Metropolitan Health Dept.
- Kentucky Division for Air Quality

EPA concurrent review requested	Yes
Public Notice publication date	_____
Public Notice period completion date	_____
Public Notice publication-related comments	_____
Public Hearing requested date	_____
Public Hearing date	_____
End of Comment Period for Public Hearing	_____
Public Hearing Comments	_____
EPA Notification date	_____
EPA review period completion date	_____
EPA review comments	_____

Public Comments and APC Response

Commenter	Date of Comment	Comment	APC Response

EPA Comments and APC response

Date of Comment	Comment	APC Response

VI. Permitting Activities for Permit Since Original permit Issuance (previous permit 571158)

Significant Modification to permit 546360 (Issued on December 18, 2000): This modification was a request to add two more spray booths for the operation of miscellaneous metal part coating at source 80-0009-06. This significant modification also was a request for installation of a Thermal Oxidizer to control the VOC emissions.

Administrative Amendment to permit 546360 (Received Date: May 30, 2001) : Request for a Responsible official name change.

Minor Modification #1 to permit 546360 (Received Date: December 28, 2006) : This modification application was a request in accordance with MACT standards, to include the emissions from five storage tanks and mix room activities formerly declared insignificant activities under source 80-0009.

Minor Modification #2 to permit 546360 (Received Date: March 20, 2008): The facility had problem with their existing hot water boiler in its anodizing line. Minor Modification 2 was a request to install a temporary boiler until a permanent boiler could be installed.

Minor Modification #3 to permit 546360 (Received Date: February 4, 2009) : This modification application was a request to replace their current sodium hydroxide etching process with an acid etching solution.

Renewal Application dated October 10, 2003: Title V renewal permit No. 556821 issued on June 27, 2011.

Minor Modification #1 to Title V permit No. 556821 dated October 6, 2013 : This modification application was a request to add One Diesel-Fired Internal Combustion Emergency Generator (50 kW), 67.05 Hp Compression Ignition. Installation date was March 23, 2000. This information was included in the October 8, 2013 Minor Permit Modification Application. This source is subject to Subpart ZZZZ. Several comments from the company and the Cookeville Environmental Field Office were received and responded

accordingly. In an e-mail dated March 27, 2014, EPA indicated “EPA has completed a cursory review, and at this time has no adverse comments”. This Minor Modification #1 was issued on April 2, 2014.

Minor Modification #2 to Title V permit No. 556821 Dated August 19, 2014) : This modification application was a request to incorporate a total of nine boilers and process heaters (8 existing and one new) into Title V permit 556821 subject to 40 CFR part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters for Major Sources (the Boiler MACT). The company made some comments in regard to the method of calculations for the criteria air pollutants. There were no comments from the EPA during the 45-day comment period for this permit modification #2. MM2 modification was issued on November 14, 2014.

Minor Modification #3 to Title V permit No. 556821 Dated: February 11, 2015)

Addition of two natural gas fired with propane back up Heat Cure Tanks Heaters (CURE-1 and CURE-2)

This modification application is a request to incorporate a total of two natural gas fired (with propane as back up) Cure Tank Heaters into Title V permit 556821 subject to 40 CFR part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters for Major Sources (the Boiler MACT).

The EPA had no comments on the draft permit, and the FINAL MM3 was issued on June 19, 2015.

The following statement was provided by the Division’s Modeler (Haidar Alrawi) during the processing of the Minor Modification #3. The issues with Ammonia emissions will be considered at the time of renewal of Title V permit No. 556821 for this facility:

Acid Etch Process and Stripper

Aluminum is dipped first into a tank to etch the extrusion surface and is then is dipped into a rinse tank to halt the etching process. In the following process stage, dissolved ammonia in rinse tank wastewater is removed in the two strippers (main and a back-up). The amount of ammonia emitted from the stripper(s) is limited to 45.0 pounds per hour and 197.1 tons per year with the following air dispersion stack parameters:

Stack Height: 39 ft.

Stack Inside Diameter: 3.5 ft.

Stack Exhaust Air Flow: 25,000 ACFM

Stack Exhaust Temperature: 80°F

Stack Exhaust Direction: Vertical

Stack Location – Main Stripper:

UTM Coordinates: Easting: 595.034 km; Northing: 4007.154 km

Per directive from LJH, the following source was added to their Renewal Title V Permit..

80-0009-16 : Acid Etch Process with Stripper s No. 1 & No.2

In this process, aluminum is dipped first into a tank to etch the extrusion surface and is then dipped into a rinse tank to halt the etching process. In the following process stage, dissolved ammonia in rinse tank wastewater is removed in the strippers.

E12-1. The ammonia emitted from this source shall not exceed **225.0** tons per calendar year. This emission limit is based on the Permittee's agreement letter dated December 15, 2015.

TAPCR 1200-03-07-.07(2) (State-only requirement)

Minor Modification #4 to Title V Permit No. 556821 – Application dated January 11, 2016

This modification application was for the replacement of the **2.0 MM BTU/hr**, natural gas-fired Anodizing **Boiler No.3** which supplies steam to the anodizing process, with a new boiler of the same manufacturer, model number, and same capacity at this facility. This boiler is subject to 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources - Industrial, Commercial, and Institutional Boilers and Process Heaters. The one-time energy assessment required by Boiler MACT had been performed on the new boiler. This Minor Modification also serves as the Initial Notification of Startup of the new boiler as required by Boiler MACT – 40 CFR 63.7574(c). No increase of any emissions as a result of this modification is anticipated. This application was processed through the Title V renewal permit **571158**.

Minor Modification #5 to Title V Permit No. 556821 – Application dated February 8, 2016

This modification application was for the replacement of the **2.0 MM BTU/hr**, natural gas-fired Anodizing **Boiler No.2** which supplies steam to the anodizing process, with a new boiler of the same manufacturer, model number, and same capacity at this facility. This boiler is subject to 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources - Industrial, Commercial, and Institutional Boilers and Process Heaters. The one-time energy assessment required by Boiler MACT had been performed on the new boiler. This Minor Modification also serves as the Initial Notification of Startup of the new boiler as required by Boiler MACT – 40 CFR 63.7574(c). No increase of any emissions as a result of this modification is anticipated. This application was processed through the Title V renewal permit **571158**.

2nd Renewal Application dated December 15, 2015 Title V permit No. 571158

The EPA had no comments (on March 24, 2016) on Title V renewal permit No. 571158 as indicated below and no public comments from the Citizens were received. The permit writer had a plant visit on April 28, 2016, and the final permit was issued (dated) on April 20, 2016.

Younes,

Thank you for sending us this renewal. I don't plan to target Bonnell Aluminum, Inc.; however, do you have the date that the public notice was published? Thanks again for your help.

Eva

Administrative Permit Amendment #1 to Title V Permit No. 571158- Application dated May 10, 2016

This permit amendment was a request by the permittee to change the Annual Compliance Certification reporting period in **Condition E2(b)**, **(from April 1 of each calendar year to March 31 of the following calendar year) to (from January 1 of each calendar year to December 31 of each calendar year)**. There were no comments from the permittee, and therefore Administrative Permit Amendment 1 was issued on **May 19, 2016**.

Minor Modification #1 to Title V Permit No. 571158 – Application dated October 4, 2016

This modification application is a request for adding a **2.5 MM Btu/hr.** natural gas-fired burner to their existing Paint line No. 1 Heater identified at Source **80-0009-15**. This burner will be replacing the one that has been out of service for several years. The addition of this burner would help the process tank run more effectively when the heater is operational at full capacity. **(Total now: 5.0 MM Btu/hr)**

This heater now will be considered a reconstructed source with respect to 40 CFR part 63, **Subpart DDDDD** - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters **(the Boiler MACT)**. The specific requirements from the Boiler MACT applicable to the natural gas-fired process tank heater are as follow:

- **Initial Notification due within 15 days after Startup,**
- **Initial Tune-up due within Five (5) years after Startup, and**
- **Notification of Compliance Status and Ongoing Compliance Reports due after the Initial Tune-up**

On December 6, 2016, EPA e-mailed the following:

Younes,

We do not have outstanding questions and you can proceed to issue the permit as you see fit.

The FINAL Minor Modification #1 to Title V permit No. 571158 was issued on December 7, 2016.

Minor Modification #2 to Title V Permit No. 571158 – Application dated November 30, 2018

The facility is replacing their 22.4 million Btu per hour furnace #3 (source 80-0009-09) with furnace #4 (source 80-0009-10), which will have the same Btu rating.

- E1. Updated accounting period dates.
- E2(d)-6. Added the low NOx emission factor for furnace 04.
- E4-1. Updated the source description.
- E4-12. Added the performance test requirement for furnace 04.
- E5. Updated the description.
- E5-1. Updated the description.
- E5-3. Updated the description.
- E5-4. Corrected the reference to condition E2(d)-6.

Email application notification: December 4, 2018

EPA comments: None, per email dated February 19, 2019

Minor Modification #2 to Title V permit No. 571158 was issued on February 21, 2019.

Administrative Amendment #2 to Title V Permit No. 571158 – Application dated January 2, 2020

Facility name change from “Bon L Manufacturing Company” to “Bonnell Aluminum, Inc.”, there is no change in ownership.

Updated Condition E1.

Administrative Amendment #3 to Title V Permit No. 571158 – Application dated January 8, 2020

Replacing the burner on Paint Line #3, the existing 2.5 MMBtu/hr natural gas indirect-fired process tank heater will be replaced with a new unit of the same capacity. Per Condition E11-4(2), this heater must now follow 40 CFR Subpart DDDDD as being defined as “New” and no longer “Existing”, so the requirements will change according to the conditions outlined in this permit.

Condition E11-1: Source 80-0009-15 – Table A

Description	Status- new or existing	Heat Input per Unit	Fuel Type
Paint Line #3 Heater (PL#3 Heater)	New	2.5 mmbtu/hr	Natural Gas, Propane as Backup

Minor Modification #3 to Title V Permit No. 571158 – Application dated January 29, 2020

Updated Aluminum Melting and Casting Operations:
80-0009-10 – 26.8 MMBtu/hr Casting Furnace 04, firing natural gas with propane backup, low NOx burner

Update Facility-wide Potential Emission in section IV(a) and typographical errors on this Statement of Basis

Minor Modification #4 to Title V Permit No. 571158 – Application dated April 23, 2020

Updated Condition E2(d)-1 to include the latest application.

Updated Condition E11-1 (Source 80-0009-15) – Replacing Anodizing Boiler 1 (ANOD-1) with a new unit of the same size and capacity. See pages 64 through 67 of the permit.

Updated Condition E11-3 to give the table a name. (Table B)

Insignificant Activities List updated: pyrolysis oven being replaced with a new unit of the same heat input and a dross press being replaced with a new unit of the same throughput capacity.

Minor Modification #5 to Title V permit No 571158 – Application dated September 8, 2021

Replaced ANOD 3 with new low nox boiler of same capacity. E11-1 Updated with information about new boiler and updated Table A to reflect statuses of boilers, and heaters,

EPA Notification date 11/1/2021

EPA review period completion date 12/16/2021

EPA review comments Do not intend to target

3rd Renewal Application dated September 29, 2020 Title V permit No. 578578

The final permit was issued (dated) on...The changes from constuction permit 979405 issued TBD, 2022 were incorporated with this permit renewal. General Conditions D11-D14 were added. Attachment 8 Title V fee selection form was added. Removed E6-3(k) to reflect updated rule. Updated Attachment 5 for changes in rule.

VII. Regulatory Considerations

The Metal Parts Coating line (80-0009-06) is subject to **1200-03-18-20 Coating of Miscellaneous Metal Parts and 40 CFR 63 Subpart M**—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products. Both the state (1200-03-18-20) and Federal (Subpart M) Rules require maintenance of a minimum oxidizer (afterburner) temperature, based on the measured temperature during a compliant test, in order to demonstrate ongoing compliance with the respective emission limits for these regulations. However, the Federal MACT Rule, Subpart M, at § 63.3892 (Table 1) does not allow any **50°F ‘deviation’** from the required minimum temperature. The MACT rule states that “The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.3967(a).” Therefore, the compliance requirements for MACT are stricter than the compliance requirements for 1200-03-18-.20. Final rule amendments were published in the federal register on Wednesday, July 8, 2020. The EPA included the requirements for periodic control device testing due 3 years from the date of publication and elimination of the startup, shutdown, and malfunction provisions from the rule effective 181 days from the date of publication January 5, 2021.